# 2020 Census Operational Assessment Report – Census Questionnaire Assistance

*A New Design for the 21st Century*

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*Version 1.0*
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## Executive Summary

During the 2020 Census, the U.S. Census Bureau was responsible for providing telephone support to callers who needed assistance in completing their questionnaires through a program called Census Questionnaire Assistance (CQA). CQA provided support in the form of answering frequently asked questions (FAQs), helping callers fill out the census questionnaire, and completing questionnaires over the phone via an interview between the caller and a customer service representative (CSR).

Unique toll-free telephone numbers (TFNs) provided dedicated support for callers in English, Spanish, and 11 non-English/non-Spanish (NENS) languages: Arabic, Chinese (Mandarin and Cantonese), French, Haitian Creole, Japanese, Korean, Polish, Portuguese, Russian, Tagalog, and Vietnamese. CQA also provided support for callers originating in Puerto Rico (English and Spanish), callers who were deaf or hearing impaired and used telecommunications device for the deaf (TDD) or teletypewriter (TTY) technology, and group quarters (GQ) administrators. Calls to the English and Spanish language lines connected to a front-end Interactive Voice Response (IVR) system where callers could obtain information by selecting from a series of menu options before transferring to a CSR, if needed. The CQA phone numbers were available for live CSR support from March 9 to October 15, 2020. CQA operated 10[1] call centers across the United States in support of the 2020 Census.

In addition to the inbound call capabilities, CQA conducted one outbound operation. The Outbound Coverage Improvement (CI) operation was aimed at resolving potential coverage-related issues that occurred during the initial census data collection. For example, when a respondent indicated that their child lived part of the time at "College," the CI interview aimed to collect information, such as the address of the college, to ensure the child was counted only once, and in the correct place.

CQA established a Quality Management program to ensure data accuracy and high levels of customer service for both the Inbound and Outbound operations.

The purpose of this assessment is to document aspects of the CQA operation related to the performance of the program, as well as to provide recommendations to consider in the next planning cycle in support of the 2030 Census.

### *Results*

CQA received 13.5 million inbound calls during operations. More than 87 percent of calls were received on the English language lines (stateside and Puerto Rico), more than 10 percent of calls were received on the Spanish language lines (stateside and Puerto Rico), and

[1] In April 2020, a portion of the CQA Operational Command Center (OCC) in Washington, D.C., was converted into a call center and began hiring NENS CSRs to help with staffing shortages because of the COVID-19 pandemic. To simplify reporting, CQA call data from the OCC was combined with the New York call center.

approximately 1 percent of calls were received on all NENS language lines combined. Additionally, 1 percent of calls arrived on either the TTY or GQ support lines.

Based on call volume metrics from the 2010 Census and middecade tests, CQA determined that an IVR application would only be offered on the English and Spanish language lines. More than 61 percent of the English and Spanish calls were contained within the IVR, and therefore deflected[2] from the CSR service queue[3]. Nearly 74 percent of IVR deflections occurred after callers heard a prerecorded broadcast message[4], demonstrating the importance of placing relevant information to callers upfront in the IVR. Callers from the NENS languages also heard important broadcast messages, but they were not given the additional self-service features that an IVR offers to callers on the English and Spanish language lines.

The volume of deflected calls away from the CSR service queue meant that the number of calls offered to CSRs was closer to 5.2 million, of which 4.7 million were handled by CSRs. More than 493,000 calls were abandoned in the CSR service queue, however, more than 50 percent of those calls were abandoned within 30 seconds of the caller entering the queue. Overall, more than 73 percent of calls handled by CSRs were answered within 30 seconds.

Of the 4.7 million calls handled by CSRs, more than 4.2 million were on the English language lines, more than 400,000 were on the Spanish language lines, and nearly 57,000 calls on one of the NENS language lines. Of the NENS languages, Mandarin handled the greatest number of calls (19.5 percent), and French handled the fewest (2.1 percent).

The average handle time (AHT) for all calls handled by CSRs was 9 minutes, 24 seconds, but varied by language and the type of call (e.g., enumeration, general assistance). The average handle time for calls was less than 9 minutes for English, more than 15 minutes for Spanish, and the NENS language lines ranged from under 12 minutes for Japanese to more than 16 minutes for Tagalog. Nearly 54 percent of CSR handled calls to CQA were dispositioned as enumerations, and more than 36 percent were dispositioned as general assistance calls. Other call dispositions (e.g., disconnected calls, threats, complaints, etc.) accounted for 10 percent of handled calls. Although CSRs dispositioned calls as enumerations 54 percent of the time, CSRs selected enumeration as the caller's initial reason for contacting CQA 48 percent of the time, showing that many calls that started as general assistance calls ended as enumerations. Beginning in May 2020, CQA began proactively offering to complete callers' census questionnaires over the phone to increase response rates, which resulted in additional CQA enumerations.

Of those respondents completing their census questionnaires over the phone, 61 percent identified as female and nearly 54 percent were age 65 or older. Note that while CQA

[2] Deflected calls - Inbound calls that are serviced completely within the IVR and do not enter the service queue to speak to a CSR.
[3] Service queue – A series of calls lined up, typically in chronological order according to when they arrived, that are waiting to speak to a CSR. Each language/support line had a dedicated service queue.
[4] Broadcast messaging – Timely and relevant prerecorded messages that provide callers with important information they may be calling about, aligned with the 2020 Census mailing strategy and NRFU activities.

respondents tended to be from the older population during the 2020 Census, this information is in alignment with results from recent census tests and is not surprising given this group is less likely to have internet access than younger population groups. Nearly two-thirds of people responding over the phone disclosed their race as White and nearly 16.5 percent reported being of Hispanic origin. Overall, 72 percent of phone enumerations were completed using a valid Census ID, whereas 28 percent of enumerations were submitted without a Census ID.

CQA received the most questions from callers wanting to know how they could get a paper questionnaire mailed to them, whether they could complete the census over the phone, and why someone was contacting them during the NRFU operation after they had already responded. Other top reasons people called CQA were to know how to respond if they had more than one home, why they were still receiving mailings, and whether their completed census response was received.

The COVID-19 pandemic caused changes to the 2020 Census plan resulting in a data collection period for CQA that was longer than originally expected. These changes were the primary reason for three separate reforecasts of the planned call volume over the course of the CQA operation to adjust staffing levels. Although the operation lasted just over 31 weeks, the program received 53 percent of all calls during the first four weeks of operations. During this time, CQA was operating on a reduced staffing model brought on by the COVID-19 pandemic. Reduced staffing and higher than anticipated call volume meant callers experienced longer wait times to speak to a CSR, causing many of them to disconnect within the IVR or abandon their call while waiting in the service queue. When callers disconnected or abandoned, they often called back later that day, which added to overall call volume. This is evident by the volume of repeat callers, who accounted for 28 percent of calls on April 1, 2020 (Census Day), which was the day when CQA received the most calls. CQA also received many repeat callers during the NRFU operation, which was also CQA's second peak for call volume. On August 23, 2020, repeat callers accounted for 33 percent of calls received.

Over the course of operations, CQA received inbound 822 threat calls. While 20 percent of all calls CQA received were during the NRFU operational period from August to October 2020, CQA received more than 86 percent of all threat calls (709 calls) during that same period. The placement of a centralized CQA TFN on NRFU materials left at housing units instead of the census worker's contact information resulted in high call volume to CQA.

CQA received 87 percent of inbound calls between Monday and Friday, with Monday being the day that CQA received the most calls. Sundays accounted for only 4.6 percent of total call volume. Although CQA's hours of operation were from 7 a.m. to 2 a.m. Eastern Time (ET), the program received more than half of all calls between noon and 5 p.m. ET, with the 2 p.m. hour receiving the highest volume of calls.

For the Outbound CI operation, CQA made 18.3 million outbound dial attempts on nearly 3.8 million unique cases. Most attempts resulted in an answering machine, accounting for 53.1 percent of all outbound dials. The total amount of outbound calls handled by CSRs was

nearly 7 million. In addition, Outbound CSRs handled more than 850,000 respondent callbacks, which often occurred immediately following a dial attempt where a voicemail was left either by the dialer or the CSR.

Prior to the start of operations, CQA set a goal of 40 percent completion rate for the Outbound CI operation. The Outbound CI operation exceeded this goal, with a final completion rate of 44.8 percent of the 3,782,515 attempted cases. In total, nearly 1.7 million cases were closed after a completed or partially completed interview. More than three-fourths of all completed cases were completed on or before the fourth attempt, the majority being completed during the second attempt. The rate of completion fell to less than 2 percent following the seventh attempt.

As part of the Quality Management program, calls that were handled by CSRs were recorded and a portion of these calls were evaluated by quality assurance purposes. The Quality Management program monitored and evaluated more than 49,000 inbound calls and more than 29,000 outbound calls throughout operations. The average Data Quality Audit evaluation [5](DQA) score was 97.8 percent, and the average Quality Audit evaluation[6] (QAE) score was 97.1 percent.

***Conclusions and Recommendations***

The COVID-19 pandemic forced CQA to make several adjustments as part of its pandemic contingency plan, including reducing physical staffing at the call centers to 50 percent. Reduced staffing combined with high call volume led to more IVR deflections for English and Spanish, but also higher overall call volume since many of those respondents called back. At the beginning of operations, staffing for some NENS languages was below the hiring target. Most NENS CSRs worked at the New York City call center, which was the epicenter of the COVID-19 pandemic in the beginning of operations. The pandemic caused high absenteeism rates among NENS CSRs, which caused higher than anticipated wait times for callers, and ultimately higher call abandonment rates.

Despite the numerous challenges the COVID-19 pandemic presented, CQA maintained operations every day and maintained 100 percent uptime for all critical systems, received nearly 13.5 million inbound calls across 13 languages, handled over 4.7 million inbound calls with live CSRs, with more than half of all calls dispositioned as enumerations. CQA achieved its contractual service level agreement (SLA) of answering 80 percent of calls within 30 seconds (measured weekly) in all but the first four weeks of the operation, which was when CQA

[5] Data Quality Audit (DQA) – A call evaluation that occurred when a CSR completed an enumeration over the phone for a respondent. DQAs ensured that the CSR entered the respondent information into the DCT exactly as provided by the respondent.
[6] Quality Audit Evaluation (QAE) – A call evaluation that assessed a CSR's use of soft skills, professional behavior, adherence to technical procedures, script adherence, and call management for inbound calls. These evaluations occurred both during enumerations and general assistance calls.

experienced the highest levels of call volume while operating with 50 percent of planned staffing.

CQA quickly implemented system and procedural changes to improve the caller experience when call volume was high and staffing was reduced, such as developing a Scheduled Callback capability for all languages, and a solution for CSRs to make callbacks to respondents from home. CSRs made more than 53,000 Scheduled Callbacks to respondents across all CQA-supported languages, with more than 36 percent of them dispositioned as enumerations. CQA also began hiring for the understaffed NENS languages out of the Operational Command Center (OCC) in Washington, D.C., to serve as an extension to the New York call center's NENS operation.

The Outbound CI operation was considered a success. The total amount of completed cases exceeded the target by 4.8 percentage points. In addition, CQA was able to attempt an additional half a million CI cases above the original plan without additional cost.

The Quality Management program achieved its contractual SLA goal of 97 percent adherence to the CSR quality standards for both data capture and customer service.

CQA was able to stay within its final approved budget, however, CQA requested additional funding to pay for expenses at the call centers related to COVID-19. Since the contract type was a cost-plus award fee, considerable importance was placed on budget management and spending forecasting, given known spending limits on the CQA program's budget allocations. Controlling the scope, schedule, and budget required a rigorous change management process for each proposed change to ensure accurate and documented analyses and data-driven decision-making. CQA produced its data files and management reports daily, all critical milestones were met, and decommissioning efforts were concluded ahead of schedule.

Despite the successes the CQA operation achieved in meeting program goals in support of the 2020 Census, there are also several recommendations that should be considered in the planning of the 2030 Census:

1. **Consider the need for physical call centers for the 2030 Census.**
   The method of performing the CQA operation at a physical call center, where CSR activities could be monitored in person and access to data could be secured via physical measures is costly and inflexible when program parameters need to change. In a future CQA operation, consider reducing or eliminating physical call centers and allow CSRs to work from home.

2. **CQA needs to be more involved in the CQA data collection instrument development.**
   The CQA data collection instrument should be developed separately from an ISR instrument, which would allow the specifications to include more adaptations for the phone response mode.

3. **The ability for respondents to check the completion status of the decennial census questionnaire is necessary.**
   The Census Bureau conducts other household surveys concurrently with the decennial Census, and this causes respondent confusion when they receive multiple mailings or NRFU visits. CQA should have the ability to confirm whether a respondent's decennial census responses have been received. Ideally, callers could check on their completion status by utilizing a self-service option, such as a solution built into the IVR, or on the decennial census website.

4. **Consider new IVR technologies that focus more on improving the customer experience instead of deflecting calls.**
   CQA should investigate and test newer IVR technologies, such as visual and multimodal IVR if the inbound call is from a smartphone. Visual or multimodal IVR reduces voice recognition challenges, issues, and failures, as the caller could type in the alphanumeric Census ID for self-service within the IVR or to be directed to a CSR.

5. **Decisions about the formatting, length, or sequencing of the Census ID should be made early so they could be properly tested across all technologies.**
   When considering the alphanumeric makeup of the Census ID, letters and numbers that sound the same (letters C, D, G, P, T, V, Z and number 3) should be avoided. To the extent possible, have a predictable pattern if using alpha characters. CSR recognition rates could be improved if the alpha characters were limited to only specific positions rather than anywhere within the 12 characters.

6. **Consider newer technologies for TDD/TTY that will assist respondents in both the hearing impaired and hearing populations.**
   An alternative real-time chat solution would more efficiently use CSRs, better integrate reporting and metrics into the Workforce Management solution, and enhance customer experience associated with TTY calls. If chat was offered as an additional channel to the public for enumeration, it would allow CSRs to take TTY calls through chat as well as other types of calls, ultimately increasing CSR efficiency and use.

7. **Consider government contractor liability regarding any automatic outbound dialing.**
   If the 2030 Census approach is to use contractors for the Outbound Coverage Improvement operation, the Census Bureau should consider the potential liability of the contractor for alleged Telephone Consumer Protection Act (TCPA) violations.

8. **Dual skilling CSRs should be considered as a best practice.**
   A blended workforce, where CSRs are trained in both Inbound and Outbound, is the most efficient. During recruitment and staffing, consideration should be given to the different skill sets needed for the two operations.

# 1. Introduction

The purpose of the 2020 Census Questionnaire Assistance (CQA) Operational Assessment is to:

1. Document the overall performance of the CQA program.
2. Document the data results of the program for historical and informational purposes.
3. Provide recommendations and best practices to use in the next planning cycle in support of the 2030 Census.

This operational assessment provides background information from the 2010 Census operation, named Telephone Questionnaire Assistance (TQA), as well as the middecade tests conducted between 2015 and 2018. The 2010 Census and previous census tests helped inform the development of the 2020 Census Questionnaire Assistance (CQA) operation.

This assessment will include an analysis of the public's usage of the CQA program by reviewing call patterns exhibited during the operation, as well as the impact the COVID-19 pandemic had on the CQA operation. Included are an evaluation on the success of the CQA program, as well as lessons learned and recommendations for implementing CQA for the 2030 Census.

The intended audience of this assessment are those who will be designing and planning similar components of the next decennial census. Both internal and external stakeholders to the U.S. Census Bureau who have an interest in understanding and drawing conclusions about the 2020 Census CQA operation will also benefit from reading this operational assessment report.

## 1.1 Census Questionnaire Assistance Description

The CQA operation at the U.S. Census Bureau interfaced with respondents over the telephone to assist them with responding to and completing the 2020 Census questionnaire. For the 2020 Census, the Census Bureau transitioned from collecting data primarily using paper census questionnaires to collecting data primarily online using an Internet Self-Response (ISR) instrument. The push to use the internet as the primary mode of response affected CQA workload and operations significantly. The inbound operation involved customer service representatives (CSR) fielding questions from callers and, in many cases, completing the census questionnaire over the phone via an interview with the respondent. The second major component of CQA was the Outbound Coverage Improvement (CI) operation. The Outbound CI operation was aimed at resolving potential coverage-related issues that occurred during the initial census data collection. CQA's Quality Management program supported the inbound and outbound operations by ensuring high quality for CSR customer service and data capture accuracy.

Overall, CQA had four primary objectives:

1. To provide questionnaire assistance for respondents by answering questions about specific items on the census form or other frequently asked questions (FAQs) about the 2020 Census:

   - Providing telephone assistance via an automated Interactive Voice Response (IVR) self-service menu.
   - Providing real-time assistance by CQA agents via the telephone.
2. To provide an option for respondents to complete a census interview over the telephone.
3. To conduct the Outbound CI operation to verify or clarify respondent information submitted on the 2020 Census questionnaire.
4. To ensure a high quality of customer service and data capture accuracy by implementing a Quality Management program.

CQA operated from March 9 to October 15, 2020, and assisted callers from all 50 states, the District of Columbia, and Puerto Rico. CQA supported callers in 13 languages, including English, Spanish, and 11 non-English/non-Spanish (NENS) languages: Arabic, Chinese (Mandarin and Cantonese), French, Haitian Creole, Japanese, Korean, Polish, Portuguese, Russian, Tagalog, and Vietnamese. CQA also supported teletypewriter (TTY)[7] technology to assist callers who had hearing impairments, as well as group quarters (GQ). Each language had a dedicated toll-free number (TFN) for CQA that was printed on census materials sent to households. Calls to CQA were routed to one of 10 call centers across the U.S.: Blythewood, South Carolina; El Paso, Texas; Irving, Texas; Jacksonville, Florida; Kansas City, Missouri; Nashville, Tennessee; New York City, New York[8]; Pueblo, Colorado; Tamarac, Florida; and Tempe, Arizona.

In total, more than 7,300 CSRs were hired in support of the 2020 Census CQA effort, with more than 1,150 CSRs supporting the Spanish language lines, and more than 350 CSRs supporting one of the 12 NENS TFNs[9]. The CQA Quality Management program hired 109 quality monitors (QM) to assist in evaluating CSRs' adherence to call quality standards, covering each of the CQA-supported languages. Management of the call centers, including hiring CSRs, was handled by the CQA contractor, Maximus. Table 1 below shows which languages were supported at each of the CQA call centers.

[7] Telecommunications device for the deaf (TDD) and TTY are interchangeable terms for the communication device used by people who are deaf or hard of hearing. TTY is used throughout this report.
[8] For reporting purposes, calls to the New York call center also includes those answered by NENS CSRs stationed at the CQA Operational Command Center (OCC) in Washington, D.C.
[9] CQA operated two separate TFNs to support the Mandarin and Cantonese dialects of the Chinese language.

*Table 1. Languages Supported by Call Center*

| Supported Language / Operation | Blythewood | El Paso | Irving | Jacksonville | Kansas City | Nashville | New York | Pueblo | Tamarac | Tempe |
|---|---|---|---|---|---|---|---|---|---|---|
| **Inbound** | | | | | | | | | | |
| English | X | X | X | X | X | X | X | X | X | X |
| Spanish | | X | | X | | | X | X | X | |
| Arabic | | | | X | X | | X | | X | |
| Cantonese | | | | X | X | | X | | X | X |
| Mandarin | | | | X | X | | X | | X | X |
| French | | | | X | X | | X | | X | X |
| Haitian Creole | | | | X | X | | X | | X | |
| Japanese | | | | X | | | X | | X | X |
| Korean | | | | | X | | X | | X | X |
| Polish | | | | X | X | | X | | X | |
| Portuguese | | | | X | X | | X | | X | X |
| Russian | | | | X | X | | X | | X | X |
| Tagalog | | | | X | X | | X | | X | X |
| Vietnamese | | | | | X | | X | | X | X |
| TTY | | | | | | | X | X | | |
| GQ | | | | X | X | | | X | | |
| **Outbound** | X | X | X | X | X | X | | X | X | X |
| English | X | X | X | X | X | X | | X | X | X |
| Spanish | | X | | X | | | | X | X | |

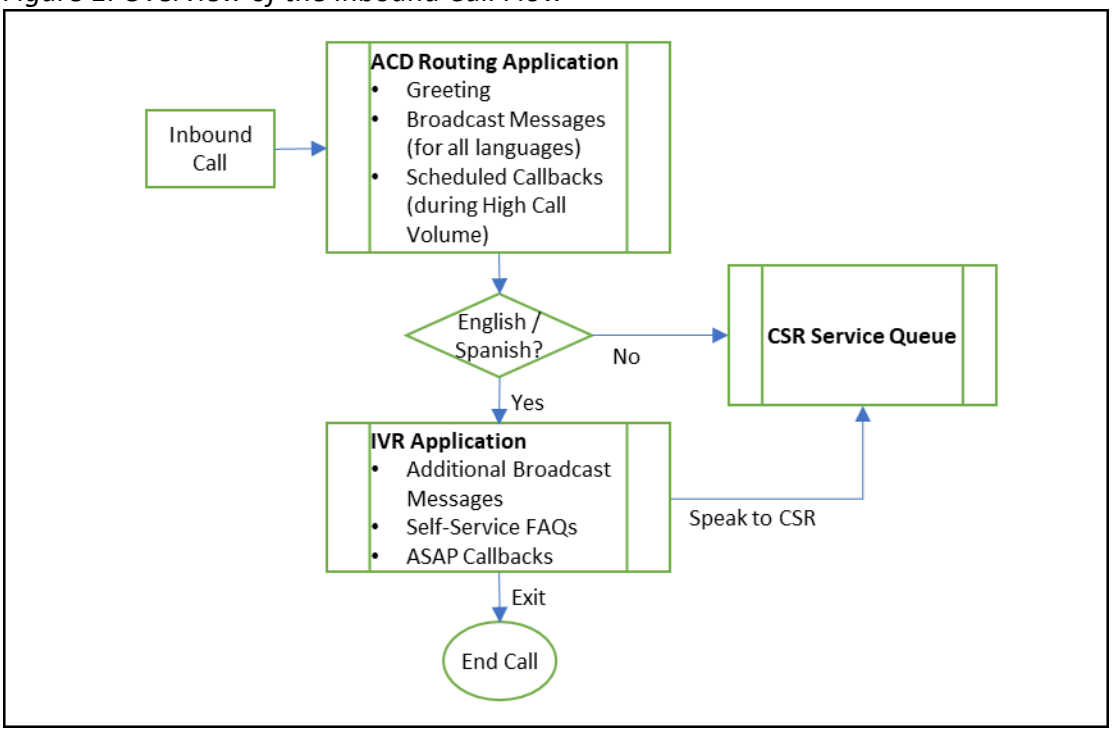
Source: U.S. Census Bureau, 2020 Census, Internal Documents.

### 1.1.1 *Overview of the Inbound Operation*

Calls to the English and Spanish TFNs connected to an IVR system where a caller obtained information by selecting from a series of menu options and, if needed, transferred to a CSR during normal business hours, which were 7 a.m. to 2 a.m. Eastern Time (ET), Sunday through Saturday. Callers on the NENS TFNs could speak to CSRs between the hours of 8 a.m. and 10 p.m. ET, Monday through Friday.

The experience that CQA callers had depended on which language line was dialed. All callers on the English, Spanish, and NENS language TFNs connected to the Automated Call Distribution (ACD) routing application. From the ACD, callers from the NENS TFNs were routed to the CSR service queue and callers from the English and Spanish TFNs were routed to the IVR. If callers from the English and Spanish TFNs needed additional assistance beyond what was available in the IVR, they were routed to the CSR service queue. Figure 1 is a high-level diagram of the inbound call flow for callers from the English, Spanish, and NENS language TFNs. Each of these components of the inbound call flow are addressed in more detail below the diagram.

*Figure 1. Overview of the Inbound Call Flow*



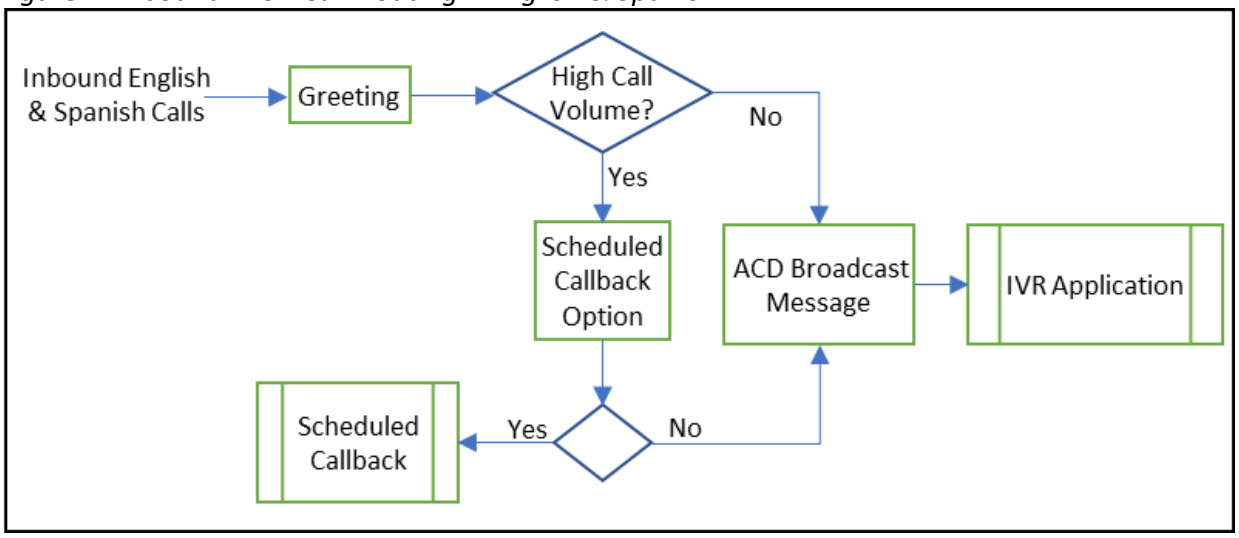

Source: U.S. Census Bureau, 2020 Census, Internal Documents.

*ACD - English, Spanish, and NENS TFNs*

When respondents first called CQA, the ACD routing system played a greeting followed by broadcast messages to callers from the English, Spanish, and NENS language TFNs, 24 hours a day, seven days a week. ACD broadcast messages were updated over time to provide callers with time sensitive information based on the timeline of 2020 Census mailings and Nonresponse Followup (NRFU) operation activities, with the idea that they could quickly provide callers the information they may have been calling about. An example of a broadcast message played at the beginning of operations was one that informed callers that paper questionnaires would be sent to households in April. Since the Census Bureau did not send paper questionnaires to all households in its initial mailing, CQA expected a high volume of calls related to people wanting to respond by paper questionnaire. Providing customer service as quickly and efficiently as possible benefited both respondents and the Census Bureau. A full list of ACD broadcast messages is in Appendix C.

If the call centers were experiencing high call volume at the time, the ACD routing application offered respondents an opportunity to receive a Scheduled Callback. If callers from the NENS language TFNs decided not to receive a Scheduled Callback, they were routed to the service queue and waited to speak to a CSR. Callers from the English and Spanish language TFNs who decided not to receive a Scheduled Callback were routed to the IVR application. Figure 2 below is a diagram of the call flow for English and Spanish TFNs within the ACD component of the IVR.

*Figure 2. Inbound: ACD Call Routing – English & Spanish*




Source: U.S. Census Bureau, Internal Documents.

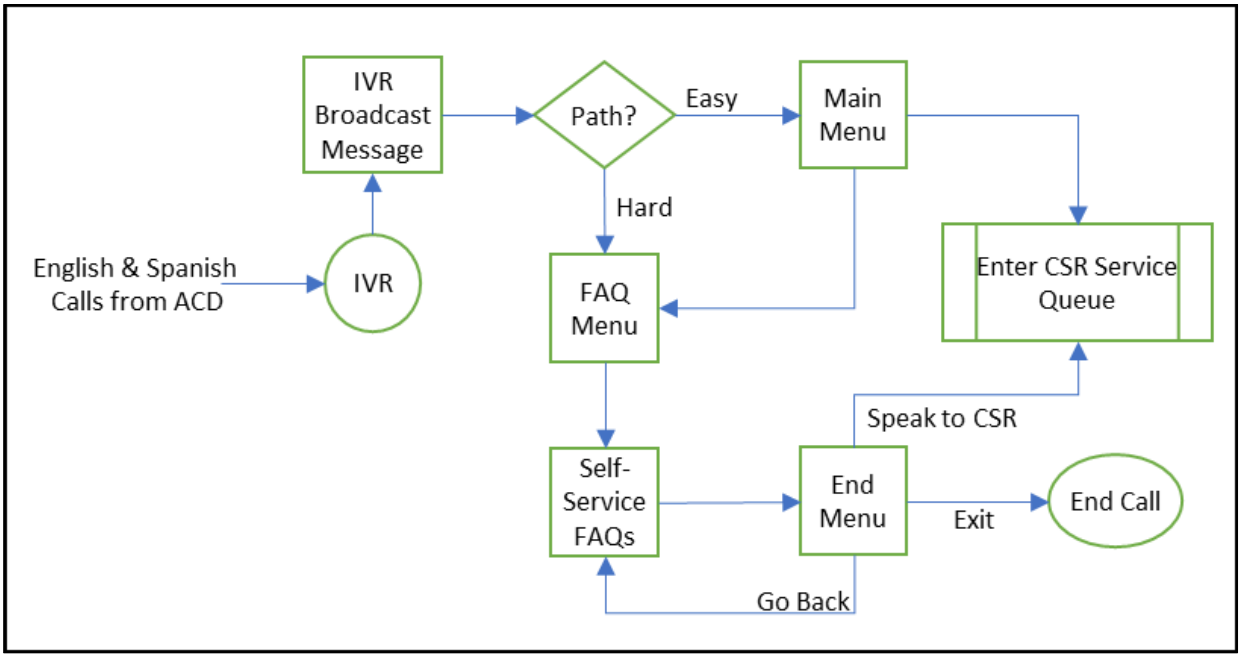
*IVR (English and Spanish TFNs only)*

After hearing the ACD broadcast messages, callers on the English and Spanish TFNs were routed to an IVR application. When entering the IVR, callers heard an IVR broadcast menu with options to hear one or more broadcast messages that were aligned with the 2020 Census program milestones, such as informing callers that they could disregard mailings related to the 2020 Census if they had already responded. This specific message was implemented in the beginning of operations because all households received a second survey invitation, regardless of whether they responded to the first invitation sent. An additional feature of the IVR was a self-service portion where respondents could navigate menus and submenus of popular FAQs related to questionnaire help, mailing materials, general information about the 2020 Census, and confidentiality. A full list of IVR broadcast messages can be found in Appendix D. If callers had additional questions about the 2020 Census that were not addressed by the broadcast messages or the FAQ self-service portion, or if they needed help completing their questionnaire, they could request to speak to a CSR.

The IVR was developed to have two navigational paths: easy and hard. The CQA operations team used an algorithm based on call volume to determine when the IVR's easy path and hard path should be used. The easy path allowed respondents to enter the CSR service queue directly after hearing the IVR broadcast message. The hard path was switched on during periods of high call volume and callers had to navigate through the self-service portion of the IVR and listen to at least one FAQ before they could ask to speak to a CSR. The intent of invoking the hard path was to deflect calls from CSRs that could have been answered within the IVR's self-service feature. Some callers complained about the difficulty of reaching CSRs when the hard path was turned on. CQA decided that callers would rather wait in the CSR service queue than

be forced to navigate the self-service portion of the IVR. On March 27, 2020, CQA turned off the hard path permanently so that callers could request to speak to a CSR at any point within the IVR. Figure 3 below is a high-level diagram of the IVR call flow for callers from the English and Spanish TFNs. A detailed diagram of the IVR call flow can be found in Appendix E.

*Figure 3. Inbound: IVR Application – Call Flow - English & Spanish*




Source: U.S. Census Bureau, Internal Documents.

The goal of the IVR was to service as many respondents as possible within an automated environment by using timely and relevant broadcast messaging and a self-service option to answer common FAQs. By fully assisting callers within the IVR, callers were able to disconnect, and the call was deflected from the CSR service queue.

*ASAP and Scheduled Callbacks*

During the 2020 Census, As-Soon-As-Possible (ASAP) Callback was offered within the IVR to callers on the English and Spanish TFNs when the wait time to speak to a CSR exceeded an established threshold. The ASAP Callback was offered after the caller asked to speak to a CSR and before entering the service queue. Instead of waiting in the queue, callers received a callback at their phone number when it would have been their turn had they remained on the phone in the queue.

The ASAP Callback functionality was turned on March 9, 2020, until it was temporarily turned off on March 30, 2020. Reduced staffing because of the COVID-19 pandemic, combined with the significant volume of respondents that accepted an ASAP Callback offered during long wait times, resulted in unanticipated operational issues with the system. After some additional

analysis and testing, ASAP Callbacks were offered again on July 24, 2020, and periodically during periods of high call volume through the end of September.

While ASAP Callbacks were turned off in late March 2020, CQA developed the Scheduled Callback solution. The Scheduled Callback solution was an effort directed by the Census Bureau senior leadership to better service NENS callers because of low service levels caused by reduced staffing.

The Scheduled Callback solution was placed after the initial greeting in the ACD routing application and was offered during periods of high call volume to callers on all language lines. Callers from the NENS TFNs could also request a Scheduled Callback if they called outside of NENS business hours, or inside business hours but no CSR was available (e.g., one agent skilled in the language and they went on break). Scheduled Callbacks offered respondents who needed help completing their census questionnaires a callback from a CSR at another time. If the respondent accepted the callback offer, the ACD routing application collected their phone number and preferred time of day to receive the callback (morning, afternoon, or evening), and the respondent would then disconnect. In most cases, callers received their scheduled callbacks within three days.

The Scheduled Callback solution, driven by the need to reduce staffing levels at the call centers because of COVID-19 and the focus on providing increased customer service to NENS callers, led to CQA implementing a CSR Work @ Home (W@H) model. W@H allowed a subset of CSRs to work from home (rather than within the secured enclaves of the physical call centers) to focus on enumerating respondents. The W@H program allowed for a reduction in staff, which supported the need for social distancing by allowing representatives to be spaced six feet apart from one another while in the call centers. Beginning in April 2020, the W@H program allowed NENS representatives to return calls while working from home with Census Bureau-issued tablets and smartphones. From April 11 to June 11, 2020, census response representatives from the Census Bureau's Mobile Questionnaire Assistance (MQA) program assisted CQA with English and Spanish callbacks. Starting in June 2020, the CQA W@H program was expanded to allow English-skilled and Spanish-skilled CSRs to begin returning Scheduled Callbacks from home.

*Live CSR Support*

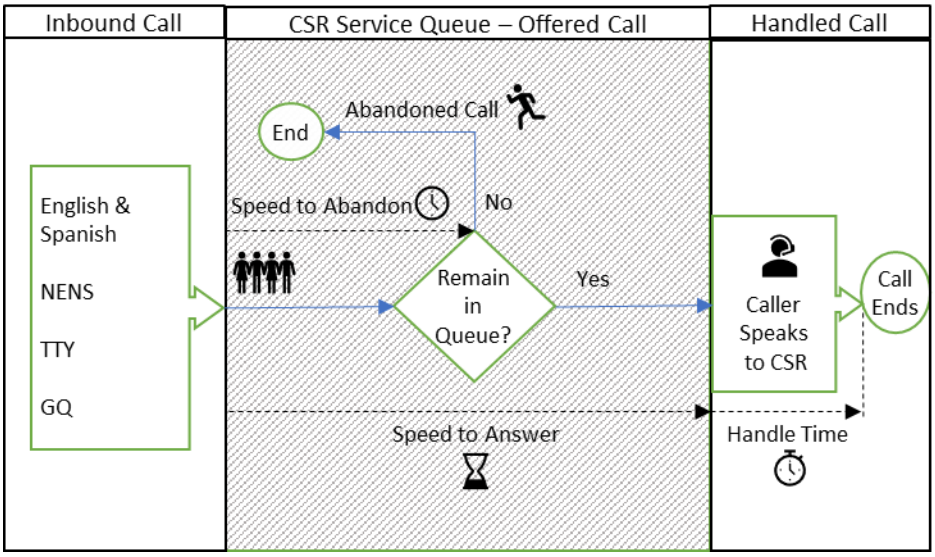
To understand the characteristics of an inbound call, it is important to identify specific terms:

- Once a caller entered the CSR service queue, the call was considered to be *offered*.
- When a call is answered by a CSR, it was considered to be *handled*.
- If a caller disconnected the call while waiting in the service queue, the call was considered *abandoned*.
- The amount of time the caller spent in the service queue before disconnecting is known as the *speed to abandon*.
- The amount of time a caller waited in the service queue before the call was answered by a CSR was known as *speed to answer*.

- The duration of a CSR-handled call, from start to finish, is known as *handle time*.

Figure 4 below is a high-level diagram of possible outcomes of calls that enter the service queue.

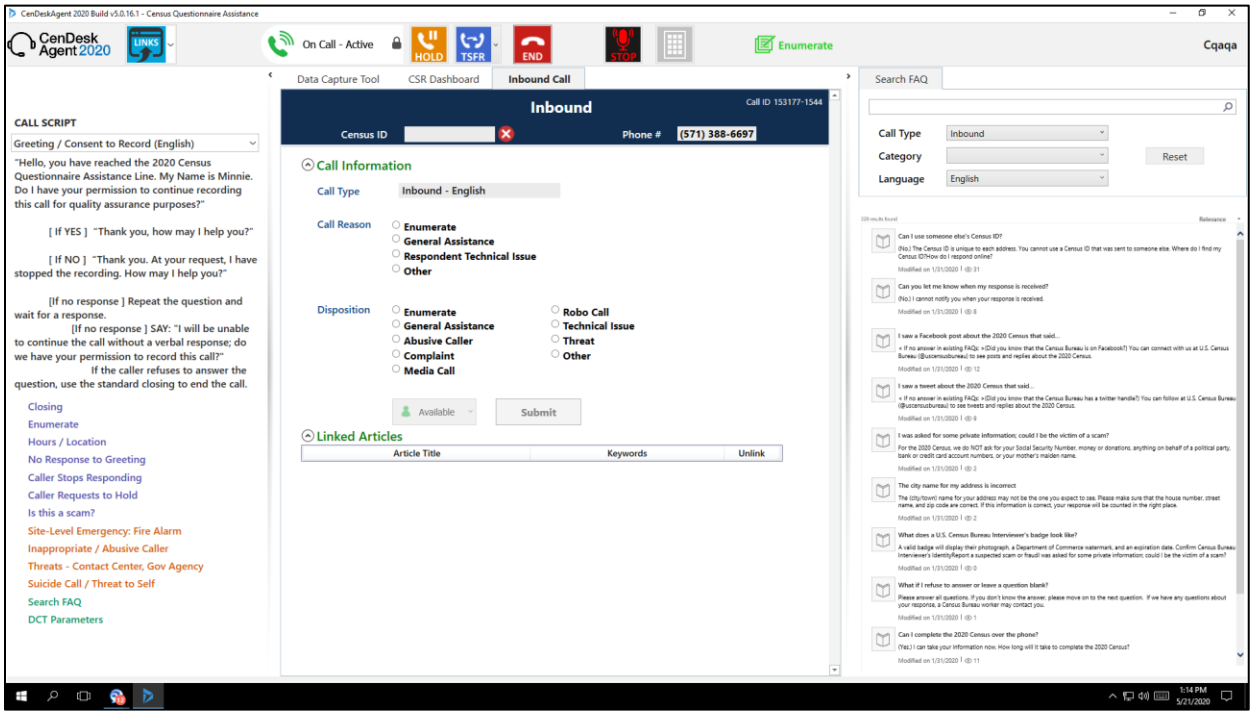
*Figure 4. Inbound: CSR Service Queue*




Source: U.S. Census Bureau, 2020 Census, Internal Documents.

The CQA contractor developed the interface that CSRs used to answer calls, known as Agent Desktop. The interface included a scripting panel on the left, call information in the center section, and the search feature for the FAQs on the right side. Call actions such as hold, transfer, or end were at the top of the screen. Figure 5 below is a screenshot of the Agent Desktop when CSRs received inbound calls.

*Figure 5. Inbound: Agent Desktop for Inbound Calls*



Source: U.S. Census Bureau, 2020 Census, Screenshot of Inbound Agent Desktop.

Depending on the TFN and service queue the call originated from, the call was routed to a CSR who was skilled in the language. The text in the scripting pane of the Agent Desktop matched the language of the incoming call. After the caller told the CSR the purpose of their call, the CSR selected a call reason from the center pane of the Agent Desktop. Call reasons included enumerate (e.g., "I'd like to complete my census over the phone"), general assistance (e.g., "I have a question about…"), respondent technical issue (e.g., "I was trying to respond online, but the website froze"), or other (e.g., there was no verbal response from the caller).

For general assistance calls, the CSR used the Search FAQ panel on the right side of the Agent Desktop to provide an answer to a question. The Search FAQ panel sourced a knowledge library of more than 450 FAQs in all supported CQA languages. All scripting within the FAQ knowledge library was approved and translated by the Census Bureau. CSRs read an FAQ to a respondent and the CSR selected a "link" button within the FAQ so that its usage would be recorded, which provided more specific details about why respondents called CQA. Within the knowledge library were also job aids, which CSRs used for more complex issues, such as providing troubleshooting to callers who could not access the ISR tool with the Census ID they were provided. Job aids were also used to help callers who had questions about how to answer certain questions on the census questionnaire, such as how to respond to the Hispanic and race questions.

If the caller wanted to provide their census information over the phone, the CSR would select "enumerate" as the call reason and select the Data Capture Tool (DCT) from the Agent Desktop toolbar. The DCT, also known as the CQA-ISR instrument, was the application that CSRs used to

complete the questionnaire for a caller. The DCT followed the same design and flow of the public facing ISR, but with additional instructional text for CSRs and the presence of "Don't Know" and "Refused" as response options on certain questions.

The census questionnaire collected the following information:

- Census ID or physical address of the housing unit.
- Number of people living or staying at the housing unit.
- Names of people living or staying at the housing unit, and a phone number where someone could be reached.
- Whether the unit was owned or rented, and by whom.
- Basic demographic information of each person in the housing unit, including:
    - Sex, age, date of birth.
    - Hispanic origin, race, and race details.
    - Relationship of each person to the first person listed on the household roster (reference person).
- Whether anyone on the roster lived or stayed someplace else on April 1, 2020.
- Whether any additional people lived or stayed at that address on April 1, 2020.

After completing the interview, the CSR submitted the respondent's census questionnaire on their behalf.

There were dedicated CQA TFNs in English and Spanish for residents of Puerto Rico. Because the Puerto Rico operation had unique differences from the stateside operation, CSRs assisted callers by addressing questions specific to Puerto Rico. There were also differences in the DCT that CSRs used when completing enumerations for callers from Puerto Rico, such as the formatting of addresses. All CSRs who assisted callers from Puerto Rico were skilled in both English and Spanish.

In addition to assisting callers from the English, Spanish, and the NENS languages, CQA offered TTY support to those who were hearing impaired. TTY technology was used to ensure the hearing impaired could contact CQA and receive the same assistance from CSRs as every other language line. Two of the call centers (New York and Pueblo) had dedicated TTY workstations that were supported by CSRs during normal business hours. TTY support was only offered in English.

From April 2 to September 3, 2020, CSRs provided general assistance to administrators calling from the GQ TFN by accessing a subset of FAQs that were unique to the GQ operation. CQA did not complete enumerations for the GQ program. GQ support was also only offered in English, however, Spanish-speaking callers needing assistance could be transferred from the ACD to another support line operated by the GQ staff at the Census Bureau.

### 1.1.2 *Overview of the Outbound Coverage Improvement (CI) Operation*

From April 22 to October 15, 2020, CQA conducted the Outbound CI operation. The main objective of the Outbound CI operation was to resolve potential coverage-related issues that occurred during the initial census data collection. Cases were selected for the Outbound CI operation if they met at least one of the following criteria:

- Low Count Discrepancy (LCD): Number of names on original roster[10] is less than the captured population count.
- High Count Discrepancy (HCD): Number of names on original roster is greater than the captured population count.
- Undercount (UC): Response to UC question was "Yes."
- Overcount (OC): Response to the OC question was "Yes" OR at least one person on the household roster indicated an OC reason.

Only census responses from the 50 states and District of Columbia completed in English or Spanish were eligible to be selected for follow-up during the Outbound CI operation. Census responses from all the following operations were considered: ISR, NRFU, Update Enumerate (UE), Update Leave (UL), Remote Alaska (RA), paper operations, and CQA.

In total, CQA received 8,743,662 eligible cases, of which 8,505,548 were English and 238,114 were Spanish. Cases upon selection were assigned a value, referred to as a Bucket, to indicate the reason for selection:

- Bucket 1 – LCD (No ISR) – Low Count Discrepancy criteria met, for all modes excluding ISR. (*337,348 Cases Received*)
- Bucket 2 – UC Paper – Undercount criteria met, for Paper mode only. (*656,724 Cases Received*)
- Bucket 3 – UC No Name (No ISR) – Undercount criteria met, but no name was added, for NRFU, CQA, UL, UE, and RA modes. (*3,932 Cases Received*)
- Bucket 4 – OC College – Overcount criteria met, where College was indicated as the OC reason for at least one person on the roster, for all modes. (*1,735,534 Cases Received)*
- Bucket 5 – OC Military – Overcount criteria met, where Military was indicated as the OC reason for at least one person on the roster, for all modes. (*107,875 Cases Received*)
- Bucket 6 – OC Nursing Home – Overcount criteria met, where Nursing Home was indicated as the OC reason for at least one person on the roster, for all modes. (*79,909 Cases Received*)
- Bucket 7 – OC Jail – Overcount criteria met, where Jail was indicated as the OC reason for at least one person on the roster, for all modes. (*36,829 Cases Received*)
- Bucket 8 – HCD Paper – High Count Discrepancy criteria met for Paper mode only. (*184,883 Cases Received*)

[10] Original roster – The list of names of people living in the household, as captured on the original census response.

- Bucket 9 – HCD Only (No ISR) – High Count Discrepancy criteria met and is the only CI reason, for NRFU, CQA, UL, UE, and RA modes. (*192,484 Cases Received*)
- Bucket 10 – OC Job – Overcount criteria met, where Job was indicated as the OC reason for at least one person on the roster, for all modes. (*638,490 Cases Received*)
- Bucket 11 – OC Relatives – Overcount criteria met, where Job was indicated as the OC reason for at least one person on the roster, for all modes. (*2,205,241 Cases Received*)
- Bucket 12 – OC Seasonal – Overcount criteria met, where Seasonal Residence was indicated as the OC reason for at least one person on the roster, for all modes. (*1,131,040 Cases Received*)
- Bucket 13 – OC Other – Overcount criteria met, where Other was indicated as the OC reason for at least one person on the roster, for all modes. (*1,105,447 Cases Received*)
- Bucket 14 – OC HH Yes – Overcount criteria met for household, or a person on the roster indicated Overcount without selecting a reason, for all modes (*47,925 Cases Received*)
- Bucket 15 – ISR CD Check No Match – Count Discrepancy criteria met, but the answer to the check question was different from the indicated population count and the number of names on the roster, for ISR only (*172,311 Cases Received*)
- Bucket 16 – ISR CD Check Match – Count Discrepancy criteria met, but the answer to the check question was the same as the indicated population count and different from the number of names on the roster, for ISR only (*1,138 Cases Received*)
- Bucket 17 – ISR UC No Name – Undercount criteria met, but no name was added, for ISR mode. (*106,552 Cases Received*)

The Outbound CI operation was launched in three phases.

- CI Phase 1 – The first phase was only at the Jacksonville call center from April 22 to May 3, 2020. Only English cases in Bucket 4 were dialed. During Phase 1, customer service representatives (CSRs) were staffed to handle outbound dials Monday through Friday 8.am. to midnight Eastern Time (ET) and respondent callbacks Monday through Friday 7.a.m. to midnight (ET).
- CI Phase 2 – During Phase 2, which occurred May 4 to May 19, 2020, the remaining eight call centers were launched. The New York call center was not used for the Outbound CI operation. Only English and Spanish cases in Bucket 4 were dialed during Phase 2.
- CI Phase 3 – On May 20, 2020, Phase 3 expanded the operational hours to include weekends. CSRs were staffed as followed:
    - Outbound dials
        - Monday through Friday, 8 a.m. to midnight (ET)
        - Saturday 9 a.m. to midnight (ET)
        - Sunday 11 a.m. to midnight (ET)
    - Respondent callbacks
        - Monday through Sunday, 7 a.m. to midnight (ET)

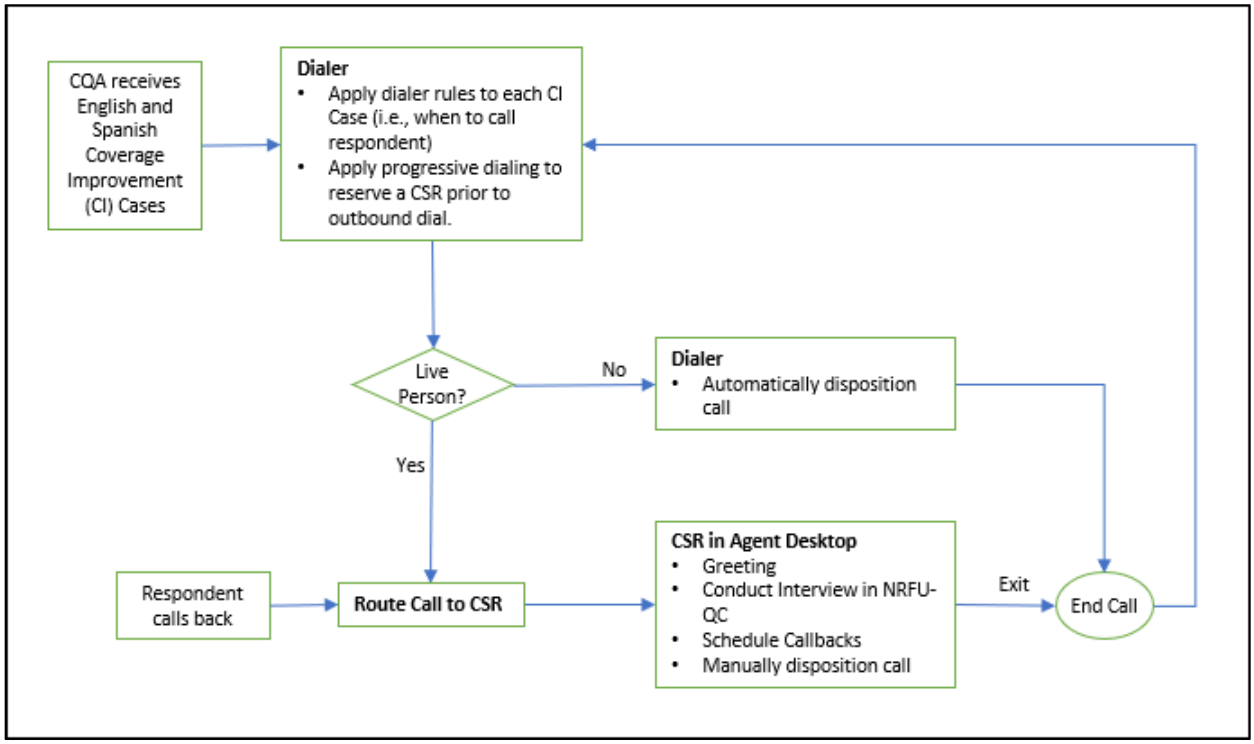
Cases were eligible to be dialed 8 a.m. to 9 p.m. local time. The time zone of the case was set by CQA using the provided ZIP Code of the address of the original census response. When the ZIP Code was not provided, the dialing hours were set to 2 p.m. to 9 p.m. ET to ensure it was within the dialing hours of all eligible time zones.

Buckets were prioritized by the Census Bureau throughout operations. Bucket 4, which included cases where an Overcount reason of "College" was selected on the original census response, was the first bucket released. Once a bucket was released, all cases in that bucket could be dialed. Cases within a bucket were prioritized using the date the original census response occurred. The oldest cases were dialed before the newer cases. Following Bucket 4, the rest of cases in Buckets 1 through 8 and 10 were released. Closer to the end of operations, Buckets 9 and 13 were approved by the Census Bureau to be released but were never dialed. All cases in Buckets 1 through 8 and 10 had at least one attempt before the operation ended. Buckets 9 and 11 through 17 were never dialed. A few cases in Buckets 9 and 11 through 17 were attempted when respondents called, or were transferred to, the Respondent Callback line.

Progressive dialing[11] was used to reserve a CSR prior to each outbound dial. Once the dialer detected a live person, the call was routed to the CSR. Otherwise, the dialer left a voicemail message. English and Spanish languages each had a dedicated TFN that was left on voicemail messages. Respondents that called back on the TFN were referred to as respondent callbacks. Respondents could also be transferred from the Inbound operation to the English or Spanish respondent callback lines, upon request. During a respondent callback, the CSR had to look up the case using the Case ID provided in the voicemail message or by using the phone number associated with the case. The Outbound Call Flow is summarized in Figure 6 below. A more detailed version can be found in Appendix I, Outbound Flow.

[11] Progressive Dialing – Reserving a customer service representative (CSR) before automatically placing the phone call to the respondent, so that a representative is on the line if the respondent answers.

*Figure 6. Overview of the Outbound CI Call Flow*




Source: U.S. Census Bureau, 2020 Census, Internal Documents.

The CI interview was estimated to take approximately seven minutes and verified the number and names of the people living or staying in the household. If someone new was added to the roster during the interview, their name, sex, age, date of birth, and relationship to the reference person (first person listed on the roster) or primary owner/renter was recorded. Hispanic origin and race were not collected during the CI Interview. The Overcount question was also asked for each person on the roster. The Overcount question asked if a person lived or stayed someplace else around April 1, 2020, and if yes, the reason why. If a reason was selected, the next screen was used to add the address for that other place. Two additional questions followed regarding where the person was on April 1, 2020, and at what address the person spends most of their time. The answers to these questions are used to determine where a person should be counted.

The outcome of every outbound dial and respondent callback was assigned a disposition that identified what happened to that case. The CQA contractor closed cases based on predetermined requirements. For cases that were not completed, there was a maximum of 10 attempts before each case was closed and not dialed again. The full list of disposition dialing rules can be found in Appendix H.

### 1.1.3 *Overview of the Quality Management Program*

At a high level, the Quality Management program was established to ensure that CSRs read required text, used appropriate FAQs to answer caller questions, collected data accurately and completely during enumerations, and used soft skills to appropriately handle calls. CQA hired QMs and used the Calabrio ONE audio and video monitoring system to evaluate a CSR's call performance.

The Quality Management program developed two types of standard evaluations to measure a CSR's call performance: one used for data quality during enumerations and another for customer service used during all calls. At a minimum, all CSRs received one standard quality evaluation per week. The CQA program had a contractual service level agreement (SLA) of 97 percent data accuracy, and a CSR's success in achieving a high overall quality score determined their tenure working on the CQA program. The two types of standard evaluations are described in more detail:

- *Data Quality Audit Evaluation (DQA).* DQAs occurred when a CSR completed an enumeration over the phone for a respondent. The focus of the DQA evaluation was to ensure that the CSR entered the respondent information into the DCT exactly as provided by the respondent. This DQA scorecard was comprised of 13 sections for inbound calls and six sections for outbound calls. If a CSR entered any information incorrectly into the DCT during an enumeration, the call resulted in a "critical fail," and the quality score of 0 percent was given to the CSR. The target goal was for CSRs to receive an overall DQA score of 97 percent.

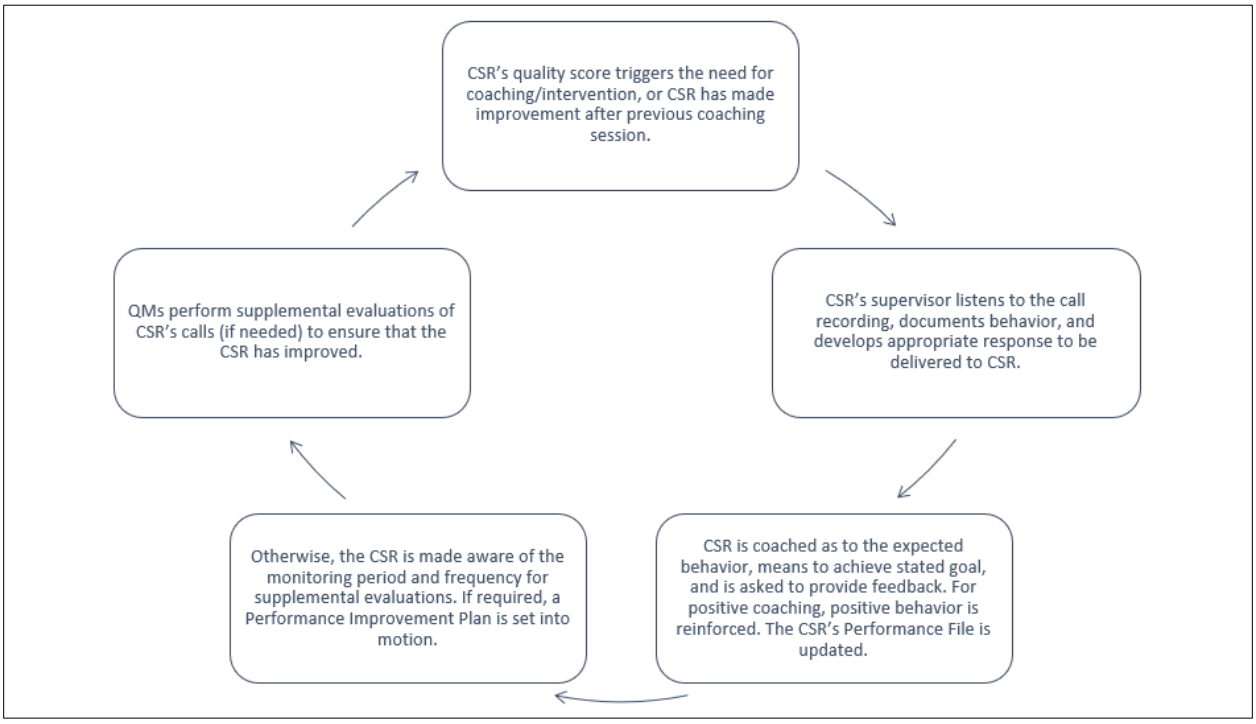
- *Quality Audit Evaluation (QAE)*. QAEs occurred when a CSR answered inbound general assistance calls about the 2020 Census, as well as during enumeration calls. The evaluations assessed a CSR's use of soft skills, professional behavior, adherence to technical procedures, script adherence, and call management for inbound calls. The QAE scorecard had eight sections of varying weighted criteria. CSRs may have received minor deductions and still receive a passing score for the call. The target goal was for CSRs to receive an overall QAE score of 97 percent. If CSRs received deductions in Sections 1 or 8 of the QAE scorecard (i.e., inappropriate procedures, unacceptable behaviors, not receiving consent to record the call), the call would result in a critical fail, and the quality score of 0 percent was given to the CSR. The Inbound DQA and QAE quality scorecards can be found in Appendix F. The Outbound quality scorecards can be found in Appendix G.

In addition to standard evaluations, QMs conducted supplemental evaluations of CSRs. If CSRs received a critical fail score, or the Calabrio ONE contact analysis software detected the use of inappropriate language, they may have been flagged for supplemental quality monitoring. Supplemental evaluations could expose the frequency or severity of errors in script adherence, poor customer service, or other inappropriate behaviors.

The CQA program developed a contingency plan if the Calabrio ONE quality monitoring system went offline (e.g., recording errors for audio and/or screen capture, error while saving a completed quality scorecard, etc.). If Calabrio ONE went down temporarily for less than two hours, the quality monitoring team set up team meetings and conducted calibration sessions. Calibration sessions served as a method to measure the validity of the quality monitoring process by eliminating perceived bias and ensuring consistent scoring across all QMs. For expected outages over two hours, QMs conducted side-by-side (SBS) monitoring with CSRs until the Calabrio ONE monitoring system was restored. SBS monitoring was a quality monitoring session where the QM sat next to a CSR and listened to the live call.

QMs had to accurately score call evaluations as defined in the DQA and QAE scorecards, and document feedback indicating what the CSR had done well and what should have been done to meet the criteria guidelines for deductions. QMs delivered quality scores to each CSR's supervisor, who would engage the CSR in a one-on-one coaching session to discuss the positive or negative quality evaluation. Figure 7. below shows the CSR coaching process.

*Figure 7. CSR Coaching Process*




Source: U.S. Census Bureau, 2020 Census, CQA Standard Operating Procedure CC03: CSR Coaching.

The timeline for when supervisors would meet with CSRs to discuss their quality evaluation depended on the quality score earned. For calls that resulted in a critical fail, QMs notified supervisors immediately, and supervisors met with the CSR to be coached on the expected behavior on the same day. For calls that scored below 90 percent (Fail), and between 90 and 94 percent (Unsatisfactory), supervisors had 24 hours to schedule a coaching session with a CSR.

Calls that were just below the passing score of 97 percent (Needs Improvement) were coached within 48 hours of when the call was scored. If a CSR's call was scored at or above 97 percent, the supervisor would provide feedback on the call during the CSR's regularly scheduled one-on-one meeting. Table 2. shows the CSR coaching timeline based on the quality scores received.

*Table 2. Timeframe for Coaching Delivery*

| Quality Score Range | Performance Level Definition | Coaching Requirement |
|---|---|---|
| **0%** | Critical Fail | Immediate / Same Day |
| **< 90%** | Fail | Within 24 hours |
| **90 – 93.9%** | Unsatisfactory | Within 24 hours |
| **94 – 96.9%** | Needs Improvement | Within 48 hours |
| **97% <** | Meets Expectations | Weekly one-on-one |

Source: U.S. Census Bureau, 2020 Census, CQA Standard Operating Procedure CC03: CSR Coaching.

CQA followed a four-step approach to progressive discipline for CSR performance issues related to quality evaluations. While many CSRs were able to make improvements after being coached, sometimes a more formal process had to be implemented to ensure improper performance could be improved. Generally, CQA's progressive discipline process followed four steps:

- First occurrence: documented coaching
- Second occurrence: verbal warning
- Third occurrence: written notification
- Fourth occurrence: Performance Improvement Plan
- Fifth occurrence: Removal from CQA program

While many CSRs had been coached on individual call evaluations that did not meet expectations, most CSRs were able to make improvements and make sure their overall quality scores stayed above 97 percent and remained on the program.

### 1.1.4 *2020 Census Mailing Strategy, Outreach, and Nonresponse Followup (NRFU) Operation*

The 2020 Census mailing strategy and NRFU operation were the most important drivers of call volume to CQA. The Census Bureau made a robust attempt to contact households to encourage self-response. The Census Bureau notified households of the 2020 Census through a series of letters, and in cases where households had not responded, postcards and paper questionnaires. The mailings instructed the public to respond to the census online or by calling CQA. The Census Bureau mailing strategy included seven mailings.

All households received the initial survey invitation (Mailing 1) between March 12 and March 20, 2020, asking respondents to complete the 2020 Census online or over the phone. Approximately 21 percent of households were sent a paper questionnaire as part of the first mailing. Regardless of whether households responded to the initial survey invitation, all households received a reminder letter (Mailing 2) between March 16 and March 24, 2020.

Households that did not complete their census questionnaires after the first two mailings received a reminder postcard (Mailing 3) between March 26 and April 3, 2020. From April 8 to the end of April 2020, all households that had not responded were mailed a paper questionnaire (Mailing 4). A second reminder postcard (Mailing 5) was sent to nonresponding households from the end of April to the beginning of May 2020.

A supplemental reminder letter (Mailing 6) was sent to households that had not responded, between July 22 and July 28, 2020. This letter encouraged respondents to complete their census questionnaire before the NRFU operation began to avoid receiving a home visit from an enumerator.

One final mailing (Mailing 7) was sent between August 21 and September 14, 2020 and included a letter and questionnaire. Mailing 7 was only sent to nonresponding households in the lowest-responding areas. Table 3 shows the dates of the 2020 Census mailing strategy and NRFU operation.

*Table 3. 2020 Census Mailing Strategy and NRFU Operational Dates*

| Outreach Effort | Description | In-Home Dates | Recipient |
|---|---|---|---|
| Mailing 1 | Initial Survey Invitation | March 12 -20 | All households |
| Mailing 2 | Reminder Letter | March 16 - 24 | All households |
| Mailing 3 | Reminder Postcard #1 | March 26 – April 3 | Nonresponding households |
| Mailing 4 | Paper Questionnaire | April 8 – 30 | Nonresponding households |
| Mailing 5 | Reminder Postcard #2 | April 20 – May 9 | Nonresponding households |
| Mailing 6 | Final Reminder Postcard (pre-NRFU) | July 22 – 28 | Nonresponding households |
| NRFU | NRFU Soft Launch | July 16 – August 9 | Nonresponding households in certain geographic areas |
| NRFU | NRFU Begins Everywhere | August 9 – October 15 | Nonresponding households |
| Mailing 7 | Letter & Questionnaire | August 21 – September 14 | Nonresponding households in low-responding areas |

Source: U.S. Census Bureau, 2020 Census, 2020 Census Mailings.

As part of NRFU, the Census Bureau visited every housing unit that had not already responded to the 2020 Census to ensure a complete and accurate population count. Enumerators visited households and used smartphone devices to capture household census responses. If a respondent was not home when the enumerator visited, a Notice of Visit (NOV) with information about how to respond online or by phone was left at the home. Enumerators made multiple attempts to collect responses from households if no response was received after the first attempt (Census Bureau, 2020). Around the time that Mailing 6 was sent to households in mid-July 2020, the NRFU operation began a soft launch of at-home visits in some geographical areas, which rolled out to additional geographical areas on a weekly basis. NRFU began nationwide on August 9, 2020, peaked in the second half of August 2020, and continued

through the end of the CQA operation in mid-October 2020. The NRFU operation was the primary driver of calls to CQA beginning in late July 2020.

### 1.1.5 *Data Collection*

The Inbound version of the CQA data collection tool was called CQA Internet Self-Response (CQA-ISR). The CQA-ISR tool integrated with the CQA system known as the Agent Desktop. The Agent Desktop included multiple tools for the CSR, including scripts, FAQs, call reasons, and call dispositions. Within the Agent Desktop, the CSR launched the CQA-ISR tool to capture the census response when the respondent wanted to be enumerated.

The Outbound questionnaire was a data collection tool called Nonresponse Followup – Quality Control (NRFU-QC). It was also referred to as the CI tool. The NRFU-QC tool also integrated with the Agent Desktop. The NRFU-QC tool was launched within the Agent Desktop on every Outbound CI dial that was handled by a CSR. Like the Inbound Agent Desktop, the Outbound Agent Desktop had its own unique scripts, FAQs, and call dispositions. The Outbound Agent Desktop did not have call reasons.

The two data collection tools, CQA-ISR and NRFU-QC, were developed by the Census Bureau-contracted Enterprise Censuses and Survey Enabling (ECaSE) Pega Systems. CQA did not have input into the structure or content of the questionnaires. While the tools integrated with CQA systems, the data collected in the tools was not accessible by CQA. All response and paradata collected in the CQA-ISR and NRFU-QC tools were immediately sent to the Census Data Lake (CDL). There are only two questions in the results section that used data from CDL. All other questions answered in the results section used data collected by CQA.

### 1.1.6 *Contractual Service Level Agreements (SLA)*

The CQA program had several SLAs with the CQA contractor relating to adequately meeting respondents needs, as well as the continuity of CQA operations:

- 80 percent of all inbound calls answered within 30 seconds (measured weekly).
- The Quality Management program shall achieve 97 percent data capture accuracy.
- CQA systems[12] shall maintain availability at 99.99 percent or higher during times systems are scheduled to be available.

While the ability of the 2020 CQA program to achieve the SLAs are measures of success of the program, some adjustments had to be made because of challenges posed by the COVID-19 pandemic.

[12] CQA systems – Any elements of the CQA solution that enable CQA (directly or indirectly) to support callers seeking assistance with responding to the 2020 Census.

## 1.2 Operational Changes Resulting from COVID-19

The COVID-19 pandemic emerged as a widespread threat in the U.S. about the same time the 2020 Census operation began. On March 11, 2020, the World Health Organization proclaimed that COVID-19 constituted a global pandemic, and on March 13, 2020, the U.S. government declared a national emergency. The effects of COVID-19 on CQA began immediately and continued through the entire operational period. A combination of understaffing in the NENS languages, implementation of block schedules, high CSR absenteeism, and the need to temporarily close call centers for sanitizing all significantly impacted CQA and forced several operational changes.

### 1.2.1 *Safety Measures at Call Centers*

CQA had to develop a Pandemic Contingency Plan and update standard operating procedures (SOP) to detail COVID-19 disease control policies and guidelines, including reducing physical staffing levels by 50 percent to adhere to the CDC's guidelines for social distancing.

During the pandemic, each call center had to be temporarily closed for decontamination after positive or suspected COVID-19 cases involving staff (though all site closures did not occur at the same time). Aside from regular deep-cleaning regimens, CQA adopted a mandatory mask requirement for all CSRs, as well as daily temperature checks. Prior to the beginning of their daily shifts, CSRs also had to complete a health screening through an app on their phones. CSRs who did not pass the health screening were not permitted to enter the call center, which contributed to the unplanned absenteeism for that day.

### 1.2.2 *Social Distancing and Reduced Staffing at Call Centers*

To adhere to social distancing guidelines outlined in the Pandemic Contingency Plan, CQA split employee schedules into two groups with rotating schedules, Block A and Block B. CSRs from Block A were scheduled to work at the call centers for two weeks while CSRs from Block B were scheduled to be at home. After two weeks and deep cleanings of the call centers, Block B CSRs worked, and Block A CSRs were scheduled to be at home. Each scheduled block was paid during the two weeks they were at home, which helped maintain enough staffing on the program. CQA operated on the block scheduling from March 22 to May 16, 2020. The block schedule model driven by the need for social distancing at the physical call centers meant there were fewer CSRs available to answer calls, which caused longer than anticipated wait times for callers to speak to CSRs.

Additionally, call volume was higher than planned, in part because of the pandemic and people hanging up and calling back when they heard a message about high call volume in the ACD and IVR applications. The result was service levels (percentage of calls answered within 30 seconds) were very low and the number of abandoned calls was high. The planned approach for ASAP Callbacks to callers on the English and Spanish TFNs had to be temporarily halted on March 30, 2020, because the number of callback requests exceeded the available staffing hours of the

available CSRs, the CSRs were being reserved by the system to handle callbacks that had been requested, and this prevented inbound calls from getting answered. Specifically, there were so many requests that the ASAP Callback application was reserving CSRs to handle callbacks as far ahead as six hours or more, often past the end of their shifts, and all incoming calls were piling up in the reserve callback queue.

### 1.2.3 *Non-English/Non-Spanish (NENS) Staffing Challenges*

In the months leading up to the start of operations, CQA was already having difficulty meeting its hiring goal for CSRs across the various NENS languages. While some NENS languages, such as Haitian Creole and Portuguese exceeded their hiring goals, CQA fell very short of meeting its hiring goals by the start of operations in several languages, such as Japanese, Vietnamese, Korean, and Polish. The vast majority of NENS CSRs worked out of the New York City call center in midtown Manhattan. New York City was the epicenter of the COVID-19 pandemic in the U.S. during the peak of operations, resulting in high levels of absenteeism for NENS CSRs. The NENS language TFNs experienced the longest wait times and abandonment rates in the beginning of operations.

CQA reduced the NENS staffing hours from 7 a.m. to 2 a.m. ET, Sunday through Saturday, to 8 a.m. to 10 p.m. ET, Monday through Friday. By eliminating weekend coverage, NENS CSRs could provide better coverage during periods of higher call volume during the week. Long wait times and difficulty reaching a CSR, especially for callers from the NENS lines because of absenteeism at the New York call center, prompted the Census Bureau to explore a work-from-home option.

### 1.2.4 *Improving the Customer Experience*

Because of a diminished customer experience resulting from long wait times and absenteeism, CQA made several operational changes, including:

- On March 26, 2020, and lasting throughout operations, CQA improved customer messaging in broadcast messages for every CQA-supported language to ensure important information was quickly available to callers.
- On March 27, 2020, CQA turned off the hard path on the IVR so it was easier to get to the service queue to speak to a CSR.
- On April 3, 2020, CQA removed Census ID capture from the IVR for English and Spanish callers.
- On April 7, 2020, CQA implemented a Scheduled Callback solution whereby CSRs could make callbacks while working from home.

Because NENS support was especially impacted by understaffing and high absenteeism related to COVID-19, the Census Bureau requested a plan for CSRs to be able to assist callers from home. As part of the newly developed Scheduled Callback solution, CQA implemented the Work at Home (W@H) model. Beginning in early April 2020, the W@H program allowed NENS representatives to return calls to respondents, intended to result in enumerations, while

working from home with Census Bureau-issued tablets and smartphones. W@H allowed for a reduction in physical staff at the call centers, while supporting the need for social distancing measures. From April 11 through June 11, 2020, the Census Bureau's MQA operation assisted CQA by responding to Scheduled Callbacks made on the English and Spanish language lines. Beginning in June 2020, the CQA W@H program was expanded to include CSRs skilled in English and Spanish. A positive effect of the W@H program was the ability to assist customers with completing their census questionnaires: more than 36 percent of W@H calls were dispositioned as enumerations.

The W@H solution was implemented as a quick, yet effective solution to a customer experience issue. One shortcoming of the W@H solution was the inability to record calls for quality monitoring purposes because the call recording software was not set up to accommodate smart tablets used by CSRs working from home. CQA did have limited quality assurance of W@H calls by monitoring the number of calls dispositioned as enumerations with how many enumerations were completed using the MQA tablets. Another shortcoming of the W@H solution was that CSRs were unable to transfer or escalate a call to a supervisor. However, after implementing the W@H model, CQA responded to more than 53,000 Scheduled Callbacks.

The virtual W@H model and increased social spacing at the physical call centers also posed challenges with CSRs receiving floor support for escalated calls. Before social distancing measures were put in place, CSRs waved a color-coded flag corresponding to the type of help they needed (e.g., waving a yellow flag meant a supervisor was needed to help answer a question; a green flag meant the CSR had a technical issue). Supervisors and lead CSRs saw the flags and went over to the CSR's workstation to assist. In a call center with reduced staffing and CSRs' workstations more spaced out, the ability to get a supervisor or lead CSR's attention was more difficult. In a W@H environment, there was no on-site floor support.

The CQA Training and Operations team created a Virtual Floor Support (VFS) functionality within the Adobe Connect interface. Adobe Connect had virtual rooms with supervisors, lead CSRs, and trainers available to assist CSRs. While VFS allowed CSRs to get assistance, the solution had its limitations, such as the number of CSRs that could be logged into Adobe Connect at one time and the increased amount of time for CSRs and the support staff to communicate by typing instead of speaking face-to-face. Despite CSR's general preference for receiving in-person floor support, VFS was still used to answer more than 18,000 questions from CSRs.

One of the biggest challenges to the success of the 2020 Census was the need for the NRFU operation to collect census data in-person at nonresponding households. When the CQA operation went live in March 2020, CSRs only completed enumerations for respondents if they were asked to do so. To help reduce the number of housing units NRFU needed to visit, CQA began proactively asking callers if they would like to enumerate over the phone beginning in early May 2020. This change resulted in more enumerations than assumed in the staffing plan, and consequently, a higher average handle time per call.

On March 15, 2020, the U.S. Department of Commerce (DOC) determined that, because of the pandemic, only mission-essential travel by DOC employees would be allowed. The CQA Government Program Management Office (GPMO) had to abandon long-standing plans to observe operations at the call centers, which would have provided additional insight into the contractor performance beyond what was shared with the GPMO in meetings. One of the benefits of having GPMO staff at the call centers was to make firsthand observations of opportunities to improve the CQA program while the program was still operational.

### 1.2.5 *Impacts to the CQA Schedule*

In addition to staffing reductions at the call centers, COVID-19 forced several changes to the schedule. One of the main reasons why the start of the Outbound CI operation was changed from April 2 to April 22, 2020, was so that the CSRs who would have been working CI starting on April 2 could instead support inbound operations when there was not enough coverage to meet the SLA of 80 percent of calls answered within 30 seconds, measured weekly. The planned number of CI cases received had to be remodeled multiple times throughout operations. The start of NRFU, when inbound calls were expected to peak for a second time, was moved from May to August 2020. A portion of CI cases were selected from census responses completed during the NRFU operation. CQA had to receive these cases later than originally anticipated, requiring staffing for CI to be adjusted to accommodate the surge in cases received in late August 2020 through the end of operations. The scanning of paper forms was also delayed, impacting when CI cases selected from census responses submitted by paper were sent to CQA.

The 2020 Census data collection end date was changed several times throughout operations. On April 14, 2020, the end of operations date was changed from July 31 to October 31, 2020. On August 3, 2020, the end date was changed from October 31 to September 30, 2020, and after a series of court hearings, the end date of October 15, 2020, was finalized. Each time a new targeted end date was announced, CQA had to modify the contract schedule. The uncertainty also meant that there was no clear guidance on several planned initiatives, including how CQA would conclude CI, the timing of site closures, decisions on site lease extensions, and the exact details of shutting down the inbound call operation. Work was also required to update the FAQs for each new targeted end date.

The changes to the 2020 Census schedule resulted in delayed in-home dates for the mailing strategy, which affected CQA's planned staffing during the operation. Additionally, delays to the schedule prompted CQA to change the broadcast messaging within the ACD and IVR applications. These changes required re-recording messages in each of the CQA-supported languages, which posed challenges with getting the same information to callers from all TFNs at the exact same time. With every new and unplanned development, FAQs had to be updated and translated into every language in a timely manner.

### 1.2.6 *Contractor Relief from Service Level Agreements (SLA)*

Circumstances driven by the COVID-19 pandemic limited the contractor's ability to ensure they would be able to maintain operational performance consistent with some of the SLAs. CQA had to temporarily close call centers for sanitization, absenteeism and attrition rates increased, and social distancing measures reduced staffing levels to 50 percent of expected levels during periods of peak call volume. On March 24, 2020, related to operations, the Census Bureau granted contractual relief to the following SLAs:

- 80 percent of all inbound calls answered within 30 seconds (measured weekly).
- The Quality Management program shall achieve 97 percent data capture accuracy.
- CQA systems[13] shall maintain availability at 99.99 percent or higher during times systems are scheduled to be available.

Despite the challenges, CQA achieved the 80 percent speed-to-answer SLA in all but the first four weeks of operations, when call volume was highest and staffing was low. The Quality Management program achieved 97 percent data accuracy, and CQA systems were available more than 99.99 percent of the time.

## 1.3 Schedule

A subset of key activities/milestones for the Census Questionnaire Assistance operation from the final baselined version of 2020 Census Integrated Master Schedule appear below in Table 4.

*Table 4. Key Activities/Milestones from the CQA Operation*

| Activity or Milestone Name | Planned Start | Actual Start | Planned Finish | Actual Finish |
|---|---|---|---|---|
| CQA Critical Design Review | 05/31/2017 | 05/31/2017 | 05/31/2017 | 05/31/2017 |
| CQA Conduct Recruiting and Hiring | 04/10/2018 | 04/10/2018 | 03/11/2020 | 03/13/2020 |
| CQA Conduct CSR Training | 12/02/2019 | 12/06/2019 | 03/11/2020 | 03/06/2020 |
| CQA Receives Operational Readiness Review (ORR) Approval | 02/12/2020 | 02/12/2020 | 02/12/2020 | 02/12/2020 |
| CQA Begin IVR Support | 03/01/2020 | 03/01/2020 | 07/31/2020 | 10/15/2020 |
| CQA Conduct Inbound Operation | 03/09/2020 | 03/09/2020 | 07/31/2020 | 10/15/2020 |
| CQA Conduct Outbound CI Operation | 04/02/2020 | 04/22/2020 | 07/31/2020 | 10/15/2020 |
| CQA Closeout - Collect Lessons Learned | 11/02/2020 | 06/24/2020 | 01/07/2021 | 12/09/2020 |

Source: U.S. Census Bureau, 2020 Census, Integrated Master Schedule.

[13] CQA systems – Any elements of the CQA solution that enable CQA (directly or indirectly) to support callers seeking assistance with responding to the 2020 Census.

# 2. Background

The 2010 Census and middecade census tests helped shape the design of the 2020 Census Questionnaire Assistance (CQA) operation. The 2020 CQA program built off the results, successes, and lessons learned from the 2010 Census Telephone Questionnaire Assistance (TQA) program and tested new technologies and models for staffing and call volume during the middecade tests. These middecade census tests helped CQA assess how call center operations can keep up with changing technological and security needs, as well as the demands and expectations of customer service from the public.

## 2.1 2010 Census

During the 2010 Census, the TQA operation provided three primary services:

- Assistance – Provide answers to questions about the 2010 Census and to provide guidance for completing the census questionnaire.
- Fulfillment requests – Take requests for census questionnaire or language assistance guides.
- Short-Form Data Capture – Conduct telephone interviews to collect census questionnaire information as appropriate.

For the 2010 Census, TQA supported English, Spanish, Cantonese, Mandarin, Korean, Vietnamese, and Russian languages. TQA received approximately 4.6 million calls, and 60 percent of English and Spanish callers were serviced entirely within the Interactive Voice Response (IVR) system.

Of the 1.66 million calls handled by TQA agents, 79 percent of calls were for general assistance (including FAQs), 13 percent were fulfillment requests, and 8 percent were requests for short form capture. The TQA program received 376,669 valid fulfillment requests, of which 79 percent were mailed back to the Census Bureau. Fewer than 29 percent of those mailed back questionnaires had a Census ID, meaning they matched the Master Address File. Through decisions made outside of the CQA program, CQA did not conduct form fulfillment requests for the 2020 Census. The middecade census tests that followed the 2010 Census focused on incorporating additional response modes, while considering the role that a future TQA program would play in offering assistance over the phone (Zajac, 2012).

Additionally, the CI operation was known as Coverage Followup (CFU). The CFU operation conducted telephone interviews with original respondents in certain households to determine if changes should be made to their household roster as reported on their initial census return. Approximately 8 million households were selected for the CFU operation, and just over 60 percent of those households completed an interview. Because of the large workload, the CFU operation drove staffing decisions during 2010. Agents were hired to work only on the

outbound campaign. Because the expected CI workload is significantly less in comparison for the 2020 Census, CSRs were trained to conduct both inbound and outbound interviews.

## 2.2 2015 Census Test

The Census Bureau tested new procedures and methods in 2015 designated to improve 2020 Census operations. The goal was to use results to develop programs for the 2020 Census that save taxpayers money, while maintaining the Census Bureau's commitment to quality and accuracy.

The Census Bureau conducted the 2015 Census Test in the Savannah, Georgia, media market (which included Savannah and neighboring counties in South Carolina and Georgia) from April to August 2015. The test was designed to further test methods of encouraging respondents to respond online, including an advertising and promotional campaign, an early engagement campaign where respondents indicated their digital contact preference, and allowing households to respond without a unique user ID. In addition to completing the census online, respondents could complete their questionnaire over the telephone with TQA.

With approximately 260,000 households in sample for the 2015 Census Test, TQA received 51,633 calls, with approximately 17,000 completed interviews over the phone.

The 2015 Census Test also tested different ways to reach out to people to inform them about the census and motivate them to complete it. In addition to an advertising campaign, the 2015 Census Test included a partnership campaign with local officials and businesses, and an early awareness and engagement campaign.

## 2.3 2015 National Content Test (NCT)

Conducted from August 24 to October 31, 2015, the 2015 NCT became the largest TQA operation the National Processing Center ever conducted. More than 900 people from the Hagerstown, Maryland; Jeffersonville, Indiana; and Tucson, Arizona, contact centers were trained to respond to incoming calls. The NCT had messaging for callers translated from English into 11 other languages, including Spanish. In total, TQA received 117,385 calls. Staff answered 101,951 inbound calls, of which 59.4 percent resulted in the caller requesting and completing an interview (Internal Documents, 2015).

To create the staffing plan for each contact center, a staffing model was created to reflect the number of calls and staffing needed per hour per day of the operation by using 2015 Census Test TQA data and the expected in-home dates and quantities of mailing materials. The NCT helped the TQA operation begin to formulate expected call volumes and staffing for large-scale census tests, such as the 2018 End-to-End Census Test (E2E CT).

## 2.4 2016 Census Test

The 2016 Census Test included approximately 225,000 housing units in selected areas of Harris County, Texas, and Los Angeles, California. The purpose was to study a variety of new methods and advanced technologies that were under consideration for the 2020 Census. The primary focus of the test was to refine the methodology for Nonresponse Followup (NRFU). Additionally, the test refined methods and related activities for maximizing self-response, particularly via the internet, to the 2020 Census. Testing in two sites allowed for learning more about managing new systems simultaneously in multiple locations.

The 2016 Census Test satisfied high-level objectives for multiple areas, most notably utilizing administrative records, optimizing self-response, reengineering field operations, and communications. One of the major goals of the test was to prove in alternative options for the entirety of the NRFU operation. In addition, the test occurred in an urban area, which supported language diversity objectives.

TQA received 33,435 calls, of which TQA agents handled 22,724. Aside from English, TQA-supported languages included Spanish, Arabic, Chinese (Cantonese and Mandarin), French, Korean, Tagalog, and Vietnamese (Internal Documents, 2016).

## 2.5 2017 Census Test

The 2017 Census Test included a national sample of 80,000 households conducted from March 20 to May 12, 2017. The Census Bureau used the same "Internet First"[14] approach to collecting responses as envisioned for the 2020 Census. The 2017 Census Test included an IVR system that included a self-service option to answer FAQs through natural speech recognition. In addition to English and Spanish, a Mandarin version of the IVR was tested as well. A primary objective of the census test was to assist inbound callers with help completing their forms. In 2017, there was no requirement for outbound operations.

During the 2017 Census Test, CQA operated two contact centers in Sandy, Utah, and Jacksonville, Florida. CQA experienced peaks in calls on the day mailing materials were delivered to households, and on Mondays. This experience helped inform the development of the staggered mailing strategy that was used in the E2E CT.

## 2.6 2018 End-to-End Census Test (E2E CT)

The E2E CT involved a self-response sample size of approximately 275,000 households in Providence County, Rhode Island. CQA operated out of the same two call centers in Sandy, Utah, and Jacksonville, Florida, and supported inbound and outbound operations from March

[14]Internet First- Mailing strategy where initial mailing sent to households does not contain a questionnaire, but a letter encouraging households to respond to the census online.

16 to July 31, 2018. During the E2E CT, CQA supported six NENS languages in addition to English and Spanish for inbound callers: Arabic, Chinese (Cantonese and Mandarin), Korean, Russian, Tagalog, and Vietnamese. To reduce the burden on the contact centers and to distribute peak call volume more evenly, mailing materials were sent to households in staggered cohorts for the 2018 E2E CT. For the E2E CT, CQA was better prepared to staff contact centers to reduce the average wait time for respondents waiting to speak to a CSR. With the realization that the 2020 Census would require CQA to operate 10 contact centers, the Census Bureau decided to adopt the same mailing strategy as the E2E CT.

CQA received 25,933 inbound calls across all language lines throughout the duration of the E2E CT. The English language line received the most inbound calls at 88.6 percent, while the Spanish language line received 10.6 percent of all inbound calls. Callers to the English and Spanish language lines were presented with a front-end automated IVR system that was available 24 hours a day, seven days a week during operations. Based on E2E CT data, the IVR system deflected 26 percent of all inbound calls on the English and Spanish lines, and CSRs handled 74 percent of the 25,933 total inbound calls. Prior to the start of operations, CQA estimated that 20,705 calls would be handled by CSRs. More than half of all inbound calls (10,088) were dispositioned as enumerations (Proudfoot et al., 2018).

As part of the E2E CT, CQA supported two outbound operations: Nonresponse Followup Reinterview (NRFU RI) and CI. NRFU RI was an outbound and field operation that served as a quality control measure for NRFU enumerations. NRFU RI business rules allowed for a three-day outbound dialing window for CQA before the cases were sent back to the Census Bureau to be worked by enumerators. This short dialing window dictated a design that did not allow for respondent callbacks to report their data and made it difficult for CQA to look at calling patterns to determine the best days and times to maximize contact with respondents. Based on the E2E CT, NRFU RI was descoped from the 2020 CQA operation. NRFU Reinterview (NRFU RI), originally requested phone support from CQA to make their quality control operation more efficient. The goal was to complete these kinds of interviews by phone whenever possible rather than sending enumerators to the housing unit for a NRFU reinterview. The completion rates for CQA were very low during the E2E CT, and Census Bureau senior management made the decision to remove NRFU RI from the CQA scope for the 2020 Census.

CI was an outbound-only operation that resolved coverage issues on census responses. CI business rules allowed for a 14-day window for calling respondents. Dialing rules, such as best day and time of day to call, and length of time between dial attempts, were determined based on metrics from the 2010 Census.

CQA made 63,208 outbound calls for CI and 32,247 outbound calls for NRFU RI. CQA outbound operations made 98,396 calls, which included 2,941 callbacks from respondents who had called CQA back after receiving a message left by a CSR. Overall, there was a 31.1 percent success rate of reaching a target respondent. Note that a “success” was defined as a CSR speaking with the

target respondent,[15] or if that respondent is unavailable, an eligible respondent[16]. This success rate was slightly higher for CI cases, and lower for NRFU RI cases. On average, the CSR reached the target respondent after two attempts. In general, the more attempts a CSR made to contact a respondent, the less likely the CSR was to make contact (Proudfoot et al, 2018).

The quality management program was successful in that the CQA program continually exceeded its SLA goal of 97 percent adherence to scorecard criteria. CQA implemented supplemental quality monitoring for CSRs with critical fails or multiple deductions, and as the test period progressed, there was a dramatic decline in critical fails. This process is being scaled for the 2020 Census. In addition, the ability for GPMO and contractor staff to listen to call recordings from the E2E CT allowed for modifications to the quality management scorecards. DQA evaluations that resulted in a critical fail created morale issues for CSRs. It would take 30 evaluations scored at 100 percent to overcome one DQA critical fail, which was not possible for the short operational period of 22 weeks. For 2020, it was determined that CSRs would be allowed a grace period of one critical fail before their adherence rates would be affected.

## 3. Methodology

All 2020 Census Operational Assessments share a similar methodology. In general, they provide details about the implementation of individual operations and processes (including final volumes, rates, and costs) by presenting data from production systems, files, and activity reports, in addition to information collected from lessons learned and debriefings sessions. These important measures are key ingredients to defining successful completion of the 2020 Census operations and processes. Typical categories of success measures are as follows:

- **Process Measures** that indicate how well the process works, typically including measures related to completion dates, rates, and productivity rates.
- **Cost Measures** that drive the cost of the operation and comparisons of actual costs to planned budgets. Costs can include workload as well as different types of resource costs.
- **Quality Measures** of operational results, typically including things such as rework rates, error rates, and coverage rates.

In addition to planning and managing the implementation of its operation, each Integrated Project Team (IPT) had the responsibility of determining the assessment questions for its operation. In consultation with the Decennial Research Objectives and Methods (DROM) Working Group, each IPT developed assessment questions tailored to the uniqueness of its operation that would yield the most useful information to those planning similar operations in the future. Assessment questions provide the framework for the Results Section appearing in each operational assessment report.

[15]Target Respondent - The original respondent who filled out the questionnaire in the initial interview.
[16]Eligible Respondent - A person who is age 15 and over and was on the roster from the original interview.

The sections that follow present the assessment questions for this operation and describe the sources of information used to answer them.

## 3.1 Assessment Questions

*Inbound Call Metrics*

1. What was the distribution of inbound calls to the Census Questionnaire Assistance (CQA) program by language line?
2. How many calls from the English and Spanish TFNs were serviced entirely within the Interactive Voice Response (IVR), and where were calls deflected within the IVR?
3. How many inbound calls were offered to CSRs?
4. What was the difference in the planned volume of inbound calls offered to CSRs and the volume of actual calls offered to CSRs?
5. What was the average speed to answer (ASA) and abandonment rate by language line?
6. What was the average handle time (AHT) by language line and call outcome (disposition)?
7. How many enumerations were completed, and what was the AHT for enumerations in each language?
8. What were the demographics (sex, age, Hispanic origin, and race) of the respondent completing the census questionnaire over the phone?
9. What percentage of responses were submitted with and without a Census ID?

*Inbound Callback Requests*

10. How many ASAP Callback requests did CQA receive, and what was the estimated wait time (EWT) to receive a callback?
11. How many Scheduled Callback requests did CQA receive?
12. What were the outcomes of ASAP and Scheduled Callback requests?

*Inbound Call Patterns*

13. What was the inbound call volume over the course of CQA operations?
14. What call patterns were experienced related to the 2020 Census mailing schedule and Nonresponse Followup (NRFU) operation?
15. Which hours of the day and days of the week received the highest call volume?
16. How often did CQA receive calls from repeat callers?
17. How often did CQA receive threat calls?

*Inbound Call Reasons and Requests*

18. What were the reasons people called CQA?
19. Which FAQs were accessed by callers most in the IVR?
20. Which FAQs were accessed and linked most by CSRs throughout operations?
21. Which job aids were accessed and linked most by CSRs?
22. How often were requests made to CSRs for paper questionnaires?

23. How often were requests made to CSRs to check whether a respondent's completed census questionnaire was received?

*Outbound Call Metrics*

24. What was the difference in the planned number of CI cases received versus the actual number of CI cases received?
    a. Total, by language
    b. Prior to April 22, the first day of outbound operations
25. How many dial attempts were made?
    a. Total
    b. By hour of the day
    c. By day of the week
    d. By week of data collection
26. What was the outcome of the dial attempts?
27. How many respondent callbacks were there?
    a. Total
    b. By hour of the day
    c. By day of the week
    d. By week of data collection
28. What was the outcome of the respondent callbacks?
29. How many dial attempts resulted in an answering machine?
    a. By the dialer
    b. By the CSR
30. What was the average length of time between a voicemail left and respondent callback?
31. What was the contact rate for reaching an eligible respondent?
32. What was the number of cases completed?
    a. Total
    b. By hour of the day
    c. By day of the week
    d. By week of data collection
33. How many dial attempts before the case was completed?
34. How many cases were completed after a "refusal" disposition on a previous call?
35. How many cases were completed after a "language barrier" disposition on a previous call?
36. What was the approach and outcome of holiday dialing (Easter, Mother's Day, Memorial Day, Father's Day, and Independence Day) during the operational period?
37. What was the AHT, by language, for completed vs. noncompleted cases?
    a. Outbound dial
    b. Respondent callback
38. What was the final outcome of each case?

*Overall Quality Metrics*

39. How many standard evaluations were completed?
40. How well did CSRs adhere to Data Quality Audit (DQA) and Quality Audit Evaluation (QAE) standards?
41. How many standard evaluations were completed each week?
42. How many supplemental evaluations were completed each week?
43. What were the average quality evaluation scores by week of operation?
44. How many critical fails did CSRs receive by week of operation?
45. What were the average quality scores by language?
46. What were the top DQA scorecard deductions received?
47. What were the top QAE scorecard deductions received?
48. How often was the quality contingency plan implemented at the call centers?
49. How many CSRs were fired because of failing quality evaluations?

*Other Items*

50. What was the total cost of CQA?
    a. What were the costs of the Inbound operation?
    b. What were the costs of the Outbound operation?
    c. What were the costs of the Quality Management program?
51. What were the week-by-week CSR staffing levels during CQA operations?
52. What was the unplanned CSR attrition rate[17] for CQA?
53. What types of technical issues were encountered?
54. What was learned during CSR debriefings?
55. What were some high-level lessons learned?
56. What would the Integrated Project Team (IPT) change about the implementation of the 2020 Census CQA operation?
57. What major challenges does the IPT foresee affecting the implementation of the CQA operation in the future?

## 3.2 Data Sources and Calculations: Production Systems/Reports

The CQA Management Reporting System (MRS) provided reporting and analytics to measure the outcomes of the call center operations. The MRS team developed a data warehouse to store the data from a range of CQA systems, including Cisco telephony, Calabrio Work Force Management (WFM), Calabrio Quality Monitoring tools, Cisco Unified Intelligence Center (CUIC), and Cisco dialer integrated with List and Campaign Management (LCM) software. Reports were developed in Tableau, which connected to the data warehouse. The Daily Briefing Report (DBR) was a deck of multiple reports produced daily in Tableau and exported and distributed as a PowerPoint presentation to all CQA stakeholders. The DBR had daily, weekly,

[17] Unplanned Attrition Rate - The rate at which CSRs separated from the CQA program that did not occur because of planned reductions in staffing levels.

and program to date (PTD) metrics for the Inbound and Outbound operations, as well as quality, technology, and SLA metrics.

In addition to the DBR, there were multiple interactive reports built in Tableau. A Distributed File System (DFS) network was a shared folder where the Tableau workbooks were placed for CQA users to consume throughout operations. Depending on the requirements, the reports were updated weekly, daily, or multiple times a day. A few reports were developed for ad hoc analysis and did not need to be updated throughout operations. In total, more than 100 report screens were developed. All reports were transferred to the Census Bureau after operations concluded.

The CQA contractor performed a daily validation of the reports. There was an overnight resource that monitored the data warehouse, as well as a checklist that was performed before the DBR was distributed. In addition, the CQA Government Program Management Office (GPMO) performed an independent validation of the data metrics. The verification, performed monthly, included comparing the data produced in the reports to the data from the source systems. The data quality measures used throughout operations insured that the data used in this assessment was accurate.

Most questions in this assessment were answered using the final DBR, produced on October 17, 2020. Some questions were answered using the interactive Tableau reports, and some required reports to be modified to precisely answer the questions. All calculations for metrics were done within Tableau and applied consistently across all reports. In some instances, data was transferred from Tableau into Microsoft Office to produce tables or graphs. Questions 8 and 9 in the Inbound Results section used source data from the Decennial Response File (DRF). This file is produced by the Census Bureau and includes the responses for housing units and GQs included in the 2020 Census.

Please note that the numbers appearing in this operational assessment report have been subjected to the U.S. Census Bureau’s approved disclosure avoidance techniques including noise injection and rounding.

## 3.3 Lessons Learned

The CQA GPMO developed and documented a formal program management process plan, titled CQA Successes and Lessons Learned Management Plan, to control and guide the collection and documentation of program successes (positive learning) and lessons learned (opportunities to improve). This plan outlined how the successes and lessons learned for the program’s operations and systems are collected, recorded, tracked, and dispositioned. The program’s collection and use of successes and lessons learned spanned the entire life cycle of the CQA program, which covered the middecade testing phases in 2017 and 2018, and the 2020 Census. The collected data from each phase was used to build the program for the next phase,

culminating in data collected during and following the 2020 Census to be used in support 2030 Census planning efforts.

In addition to the GPMO's work, the CQA program's prime contractor was contractually required to develop a plan and formally collect, develop, and deliver to the CQA's GPMO its own successes and lessons learned repository. Even though these two efforts were executed separately, the information was shared across management teams. Also, both followed similar methods for identifying and documenting data, and both had the same objective to provide feedback in support of continuous program improvement.

Methodologies used by both efforts included scheduled brainstorming sessions and weekly discussions in various management meetings regarding successes and lessons learned. The contractor also held focus group sessions with call center employees, as well as exit interviews for collecting data. Participants invited to contribute to the information gathering were all program staff working on CQA. The CQA GPMO also reached out to other key stakeholders outside of the CQA program for lessons learned, such as representatives from the ISR operation, the Content and Forms Design operation, and the NRFU operation. All information collected was assessed and refined by the program management teams and documented in a Successes and Lessons Learned register. In general, the registers contained all relevant information associated with the success or lessons learned, such as: An identification number; the date it was recorded; the current phase of the CQA contract; was it a success or lesson learned; a description of the success and lesson learned; a cause or context statement to help the reader better understand the item; a point of contact for reference; comments associated with the item; and disposition records.

## 4. Limitations

This report includes some assessment questions that were not originally included in the Census Questionnaire Assistance (CQA) Operational Assessment Study Plan. The CQA program had access to more in-depth data than anticipated at the time the study plan was developed. The following points should be noted regarding the data reported:

- The analysis in this report does not address the effectiveness of assistance provided to callers in improving response rates and response quality. While a goal of CQA was to help respondents, this was done largely by CSRs providing approved FAQs wording to the caller related to their question. It was then up to the caller to use this information to report accurate information about their household.

- Several metrics in the Results section were dependent on the actions of CSRs. CSRs had to physically make selections for call reasons and call dispositions, so user error can be expected. One example of incorrectly selected call dispositions was when CSRs selected enumeration for GQ. CSRs only provided general assistance to GQ callers and did not complete any enumerations. There were also instances where CSRs did not select a call

reason or disposition. There is a discrepancy between the number of enumerations based on the CSR selection of the call disposition and the actual number of completed enumerations captured and validated by the Census Bureau.

- The source data for the respondent demographic question (Question 8 in the Results section) and the comparison of completed cases that were submitted with and without a Census ID (Question 9 in the Results section) come from the DRF. Question 8 and Question 9 include completed enumerations that were submitted, as well as those cases the Census Bureau considered to contain sufficient data.

- The DRF, which was used to answer Question 8 and Question 9 in the Results section, may not include all responses submitted without an ID (also known as Non-ID). Some Non-ID cases requiring additional processing were not available when the DRF was created resulting in them not being represented in the data.

- CSRs were responsible for linking FAQ to the call interaction every time they read a knowledge article to a caller. The questions related to the most-linked FAQs or how often requests were made for questionnaire status and a paper questionnaire were dependent on CSRs linking the correct FAQ during each call.

- The inbound planned versus actual call volume question was difficult to answer. While there was a baseline plan for the volume of calls that would be offered to CSRs, low initial staffing for NENS languages, higher than anticipated call volume, high absenteeism, and reduced staffing plans resulting from COVID-19 all contributed to the need to reforecast planned calls offered to CSRs. Additionally, the Census Bureau made several changes to the mailing strategy dates, start date to the Nonresponse Followup (NRFU) operation, and the end date for data collection, which caused CQA to produce additional reforecasts.

- This report also answers which FAQs were accessed most in the IVR. CQA reported this, however, from March 12 to March 27, 2020, CQA implemented a hard path in the IVR during periods of high call volume. When the hard path was turned on, callers had to navigate the self-service portion of the IVR and listen to at least one FAQ before they could ask to speak to a CSR. CQA was unable to differentiate between callers genuinely interested in using the self-service to hear FAQs and callers who chose an FAQ to satisfy the requirement of the hard path so they could speak to a CSR. Additionally, the IVR broadcast messages were recorded to help deflect calls by answering caller concerns up front. CQA reports on the point of the IVR where calls were deflected, which provides some indication as to how useful the broadcast messages were.

- The analysis of repeat callers only includes those callers who called back on the same TFN on the same day but does not include callers who may have called back on another date. Repeat callers also does not consider callers who may have dialed the wrong TFN,

disconnected, and dialed the correct TFN. An example of this is someone mistakenly calling the TTY TFN, hearing the message telling them to call the English line if they were not calling from a TTY device, and that same person calling back on the English line. CQA believes this occurred often based on the unexpectedly high call volume received on the TTY TFN.

- A call that was transferred within CQA was counted in the reports as a singular call. For example, when a call came into the Russian TFN, and the CSR transferred it to the French TFN, the call was only reported as a French call. The first leg of the call, which in this example was in Russian, was excluded from reports.

- For the Outbound program, there were call dispositions and case statuses. A call that received the call disposition "Completed Interview" would then receive the case status "Closed Completed." The call dispositions did not always align with the case statuses as intended. In some instances, a case that had the case status of "Closed Completed" did not have any attempts on record that had a call disposition of "Completed Interview." One reason this happened was because the first half of a transferred call was excluded from all reports. In a few instances a completed interview took place, and then the CSR erroneously transferred the call. The call disposition would not have been completed interview, and instead, was selected by the CSR who answered the transferred call.

- At the end of operations, an Outbound CI reconciliation effort occurred between the Census Bureau and CQA systems. The goal of the reconciliation was to align case statuses between the two systems. The CQA case statuses triggered a downstream process of sending the cases to Response Processing. If CQA did not say a case was complete, it would never be sent downstream. In total, CQA had to update 1,368 cases to a "Closed Completed" case status. NRFU-QC confirmed that the 1,368 cases had a partial or completed interview. In addition, there were 7,822 cases that CQA said were "Closed Completed," but NRFU-QC did not have any record of a partial or complete interview. CQA changed the 7,822 "Closed Completed" cases to the "Closed Max Attempts" case status to prevent the incomplete cases from being sent down to Response Processing.

- There was no ability for the Quality Management program to monitor phone interactions between CSRs and respondents as part of the Work @ Home (W@H) solution. The Calabrio ONE call and video monitoring system was not set up to operate on the tablet and smartphone equipment that CSRs used for W@H.

- The call centers were open from 7 a.m. to 2 a.m. Eastern Time (ET). All reports for the CQA program are reported in Mountain Time (MT) so that data for a single operational day did not span two days in reporting. The last day of operations was October 15, 2020, in all reports, even though the call centers were technically open to 2 a.m. ET on

October 16, 2020. By presenting all data in MT, the data for an operational day aligns with a single day in the reports.

- Prior to the official start of operations, a live test was conducted in the production environment featuring real respondents that were selected by the U.S. Census Bureau. The respondents were instructed to call the dedicated TFN at a specific time and date between March 1 and March 9, 2020. These calls and their associated metrics are included in the Daily Briefing Report. For this assessment, only calls that occurred between March 9 and October 15, 2020, are included.

- Some totals in tables and figures may not add up to 100.0 percent because of rounding.

The following Results section addresses the operational assessment questions posed in Section 3.1.

# 5. Results

## 5.1 Inbound Call Metrics

### 5.1.1 *Inbound Overall Call Metrics*

1. What was the distribution of inbound calls to the Census Questionnaire Assistance (CQA) program by language line?

From March 9 to October 15, 2020, CQA received nearly 13.5 million inbound calls. The total inbound call volume includes all calls received, including calls that were deflected in the Interactive Voice Response (IVR), IVR calls that were offered to customer service representatives (CSR), and direct-to-CSR calls[18].

The English language TFNs for stateside and Puerto Rico received more than 87 percent of all calls to CQA. Calls to the Spanish language TFNs (stateside and Puerto Rico) accounted for nearly 11 percent of all inbound calls received. Together, nearly 98 percent of all calls were received from the English and Spanish language TFNs.

NENS language lines received nearly 1 percent of all calls, and the TTY and GQ support TFNs received 1.2 percent and 0.1 percent of all calls, respectively. A breakdown of the total number of calls received by language line is found below in Table 5.

[18] Direct-to-CSR Calls – Calls arriving to the CSR service queue from NENS TFNs, or English and Spanish calls that were transferred from Census Bureau call centers to CQA (shadow numbers).

*Table 5. Inbound: Volume of Calls Received*

| Language Group | Language | Inbound Calls Received | % of Total Calls Received |
|---|---|---|---|
| **Total** | | **13,489,786** | **100.0** |
| **English** | English | 11,777,060 | 87.3 |
| | English Puerto Rico | 11,429 | 0.1 |
| | **Total** | **11,788,489** | **87.4** |
| **Spanish** | Spanish | 1,327,511 | 9.8 |
| | Spanish Puerto Rico | 82,275 | 0.6 |
| | **Total** | **1,409,786** | **10.4** |
| **NENS** | Chinese Mandarin | 20,610 | 0.2 |
| | Chinese Cantonese | 15,058 | 0.1 |
| | Vietnamese | 19,667 | 0.1 |
| | Korean | 18,890 | 0.1 |
| | Russian | 10,618 | 0.1 |
| | Arabic | 6,749 | 0.1 |
| | Tagalog | 4,466 | 0.0 |
| | Polish | 3,769 | 0.0 |
| | French | 2,285 | 0.0 |
| | Haitian Creole | 4,854 | 0.0 |
| | Portuguese | 3,535 | 0.0 |
| | Japanese | 4,586 | 0.0 |
| | **Total** | **115,087** | **0.9** |
| **Other** | TTY | 161,461 | 1.2 |
| | GQ | 14,963 | 0.1 |
| | **Total** | **176,424** | **1.3** |

Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Inbound Call Statistics by Language – PTD."

2. How many calls from the English and Spanish TFNs were serviced entirely within the IVR application, and where were calls deflected within the IVR?

Over the course of the CQA program, 12.9 million calls from the English and Spanish lines were routed through the IVR application, more than 61 percent of which were deflected. Table 6 shows the rate of calls that were fully contained within the IVR, and therefore deflected, for each of the four supported language lines.

*Table 6. Inbound: ACD/IVR – Call Volume and Deflections*

| | # Calls Offered to IVR | # of Calls Deflected | Deflection Rate (%) |
|---|---|---|---|
| **Total** | **12,936,416** | **7,909,458** | **61.1** |
| English | 11,573,196 | 6,953,690 | 60.1 |
| English Puerto Rico | 11,294 | 6,812 | 60.3 |
| Spanish | 1,273,498 | 921,525 | 72.4 |
| Spanish Puerto Rico | 78,428 | 27,431 | 35.0 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics EOP: Calls Offered to IVR – Daily."

In calls that were deflected within the IVR, respondents disconnected within the ACD routing application 30 percent of the time:

- 10.9 percent during or after hearing the initial greeting message.
- 3.5 percent during or after the high call volume message.
- 15.9 percent during or after hearing one of the ACD broadcast messages. The ACD broadcast messages were timed with the mailing and outreach strategy and can be likened to public service announcements. They included general information about online response, mailing materials, and home visitations.

In deflected calls, respondents disconnected within the IVR application 70 percent of the time:

- 58.1 percent during or after hearing one of the IVR broadcast messages. IVR broadcast messages were timed with the mailing and outreach strategy and included menu options to hear more information about topics such as responding online, mailing reminders, and paper questionnaires.
- 9.4 percent within the self-service FAQ portion of the IVR.
- 2.3 percent within the portion of the IVR that attempted to collect a caller's Census ID prior to connecting to the CSR service queue. The Census ID collection functionality in the IVR was removed on April 3, 2020, because of the difficulty of accurately capturing the Census ID.

Overall, 74 percent of deflected calls occurred either during or after callers heard one of the ACD or IVR broadcast messages, pointing to the effectiveness of providing relevant announcements to callers upfront in an automated system. See Table 7 below for a breakdown of where callers disconnected within the IVR.

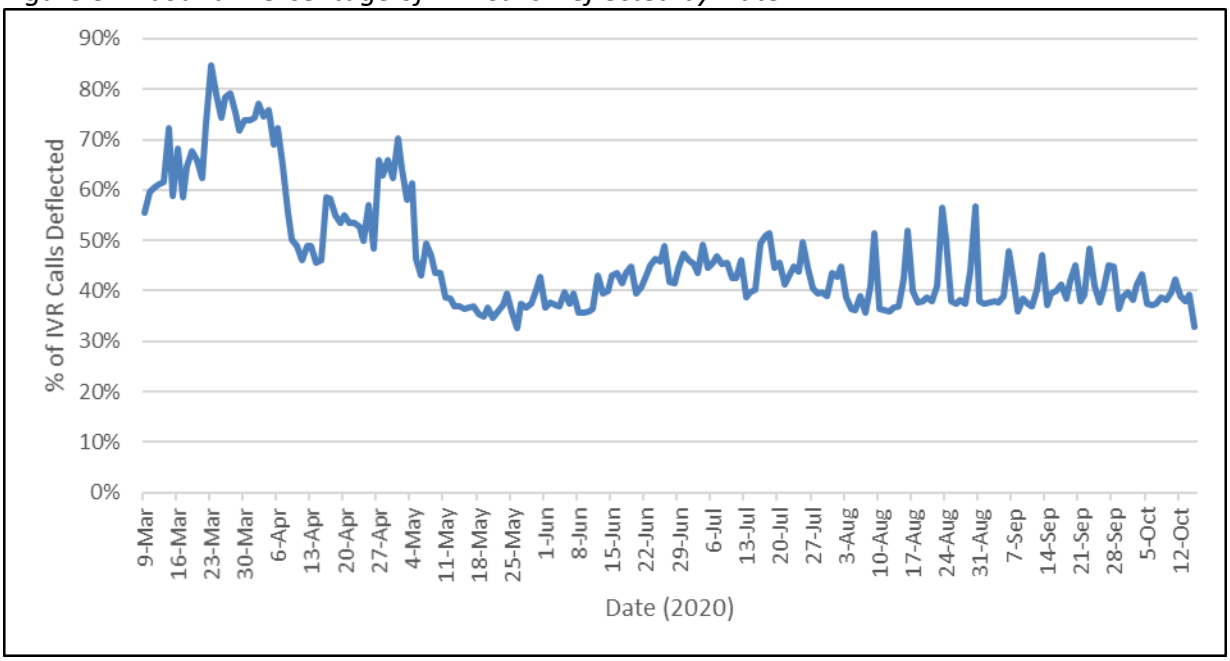
*Table 7. Inbound: ACD/IVR – Point of Deflection*

| Point of Deflection | Deflection Rate (%) |
|---|---|
| **ACD Total** | **30.3** |
| Greeting | 10.9 |
| High Call Volume Message | 3.5 |
| ACD Broadcast Messages | 15.9 |
| **IVR Total** | **69.7** |
| IVR Broadcast Messages | 58.1 |
| IVR Self-Service (FAQs) | 9.4 |
| Collect Census ID | 2.3 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Adhoc IVR Path Report."

Although the overall CQA program average deflection rate was 61.1 percent, the IVR deflection rate dropped to 57.4 percent after the hard path was turned off permanently after March 27, 2020. Figure 8 shows the IVR deflection rate by date. While the hard path was turned on in March, the IVR deflection rate was higher than at any other point during the CQA operation. The deflection rate peaked as high as 85 percent on March 23, 2020.

*Figure 8. Inbound: Percentage of IVR Calls Deflected by Date*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics EOP: Calls Offered to IVR – Daily."

3. How many inbound calls were offered to CSRs?

*Offered Calls = Total Inbound Calls – IVR Deflected Calls*

Offered calls include all callers who entered the CSR service queue, regardless of whether they spoke to a CSR. For English and Spanish, offered calls include those respondents who asked to speak to a representative while in the IVR. Direct-to-CSR calls are also included for NENS languages and those English and Spanish calls from shadow numbers[19]. If a respondent disconnected while waiting in queue, their call still counted as an offered call.

More than 5.2 million inbound calls were offered to CSRs, with 4.8 million English and Spanish calls passed on from the IVR. Of the nearly 400,000 direct-to-CSR calls to CQA:

- 82,268 calls arrived on one of the 12 NENS language lines.
- 50,978 calls arrived on either the TTY or GQ lines.
- 260,157 calls came directly to the English and Spanish CSR service queues from transfers or shadow numbers.

See Table 8 for the total volume of calls offered to CSRs by language.

*Table 8. Inbound: Calls Offered to CSRs*

| Language Group | Language | # Calls Offered to CSRs | IVR Calls Offered to CSRs | Direct to CSR Call Volume |
|---|---|---|---|---|
| **Total** | | **5,210,940** | **4,817,537** | **393,403** |
| **English** | English | 4,641,934 | 4,439,446 | 202,488 |
| | English Puerto Rico | 3,805 | 3,672 | 133 |
| | **Total** | **4,645,739** | **4,443,118** | **202,621** |
| **Spanish** | Spanish | 379,410 | 325,707 | 53,703 |
| | Spanish Puerto Rico | 52,545 | 48,712 | 3,833 |
| | **Total** | **431,955** | **374,419** | **57,536** |
| **NENS** | Chinese Mandarin | 13,877 | - | 13,877 |
| | Chinese Cantonese | 11,493 | - | 11,493 |
| | Vietnamese | 14,461 | - | 14,461 |
| | Korean | 14,898 | - | 14,898 |
| | Russian | 7,872 | - | 7,872 |
| | Arabic | 4,633 | - | 4,633 |
| | Tagalog | 2,926 | - | 2,926 |
| | Polish | 2,722 | - | 2,722 |
| | French | 1,345 | - | 1,345 |
| | Haitian Creole | 3,256 | - | 3,256 |
| | Portuguese | 2,258 | - | 2,258 |
| | Japanese | 2,527 | - | 2,527 |
| | **Total** | **82,268** | **-** | **82,268** |
| **Other** | TTY | 45,706 | - | 45,706 |

[19] Shadow numbers – Calls that were transferred to CQA from other Census Bureau call centers and the Census Bureau Customer Liaison and Marketing Services Office.

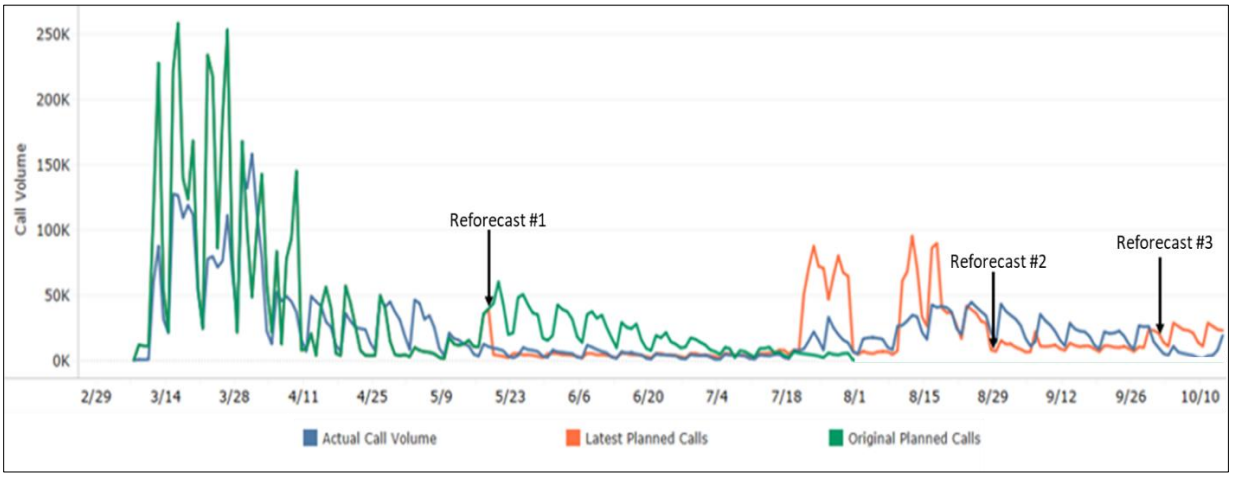
| | | | | |
|---|---|---|---|---|
| | GQ | 5,272 | - | 5,272 |
| | **Total** | **50,978** | **-** | **50,978** |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Call Statistics Language Breakout (Date Filter); Inbound: Call Statistics by Language – PTD."

4. What was the difference in the planned volume of inbound calls offered to CSRs and the volume of actual calls offered to CSRs?

Prior to the start of CQA, the operations team created a model of planned volume of calls offered to CSRs from March 9 to July 31, 2020, which was the baseline end of operations date. The COVID-19 pandemic caused changes to the 2020 Census plan, including the delaying of mailings, moving the NRFU start dates, increased call volume because of NRFU activities, and shifts in the data collection end date. The CQA operations team had to reforecast planned call volume three times throughout operations. Figure 9 shows a comparison of originally planned calls offered to CSRs (green), the reforecasted call volume (orange), and actual calls offered to CSRs (blue). Note that the orange "Latest Planned Calls" line is cumulative of all three reforecasts.

*Figure 9. Inbound: Actual vs. Planned vs. Reforecasted Volume of Calls Offered to CSRs*




Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Inbound – Planned CSR Calls - Trending."

As Table 9 below shows, actual calls offered to CSRs was 77.4 percent of the latest reforecasted planned calls to CSRs. On the English TFNs, actual calls offered to CSRs was 17 percent lower than the planned calls. Spanish calls offered to CSRs, on the other hand, was 57 percent lower than forecasted. All the NENS language lines had fewer calls offered to CSRs than forecasted, except for the Vietnamese and Korean lines. The GQ support line offered nearly 70 percent fewer calls to CSRs than forecasted.

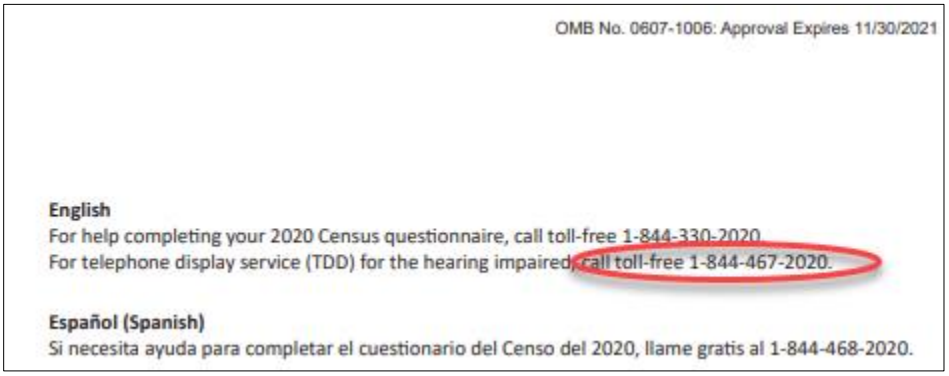
*Table 9. Inbound: Reforecasted Planned Calls Offered vs. Actual Calls Offered to CSRs*

| | Planned / Reforecasted Calls to CSRs | Actual Calls Offered to CSRs | % Difference |
|---|---|---|---|
| **Total** | **6,736,343** | **5,210,940** | **-22.6** |
| English* | 5,608,112 | 4,645,739 | -17.2 |
| Spanish* | 1,001,919 | 431,958 | -56.9 |
| NENS | 108,812 | 82,269 | -24.4 |
| TTY | 0 | 45,706 | - |
| GQ | 17,500 | 5,272 | -69.9 |

*Includes stateside and Puerto Rico.
Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Intraday Reporting; Inbound: Call Volume Detail- Intraday."

CQA did not forecast call volume for the TTY support line because the program received very few legitimate TTY calls during the 2010 Census, 2017 Census Test, and 2018 End-to-End Census Test. In 2020, the TTY TFN was located close to the English TFN on the 2020 Census questionnaire, as well as the language assistance sheet that was included with the first mailing (initial survey invitation to all households) and the fourth mailing (paper questionnaire and letter to nonresponding households). See Figure 10 below for the placement of the TTY TFN on the language assistance sheet that accompanied mailing materials.

*Figure 10. Inbound: Placement of TDD/TTY Number on 2020 Census Mailing Materials*

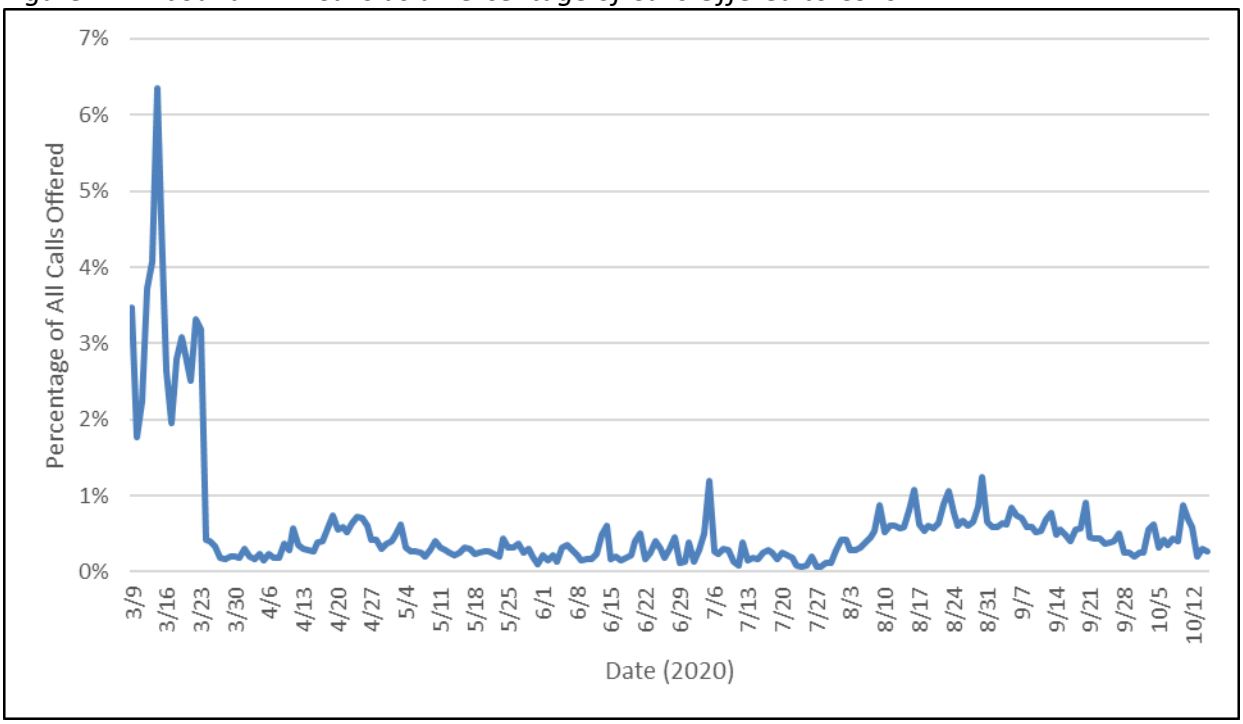



Source: U.S. Census Bureau, 2020 Census, 2020 Census Mailings, "Language Assistance Sheet."

As Figure 11 shows below, the TTY support line received a disproportionate share of the total calls offered during the first two weeks of operation, ending March 23, 2020. Beginning on March 24, 2020, CQA implemented an audio message that effectively deflected call volume by stating, "This line requires a special device for the hearing impaired. If you're hearing this, hang up and dial the 2020 Census at 1-844-330-2020. Goodbye." Prior to implementing the message,

calls on the TTY line averaged 3.2 percent of all calls offered to CSRs each day from March 9 to March 23, 2020. From March 24 to October 15, 2020, the daily volume of TTY calls offered to CSRs dropped to 0.4 percent, daily.

*Figure 11. Inbound: TTY Calls as a Percentage of Calls Offered to CSRs*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Intraday Reporting; Inbound: Call Volume Detail- Intraday."

5. What was the average speed to answer (ASA) and abandonment rate by language line?

Abandoned calls were those respondents who entered the service queue, but terminated the call before speaking to a CSR. Of the 5.2 million calls offered to CSRs, 9.5 percent were abandoned in the service queue.

The abandonment rate was more than 9 percent on the English lines and 6 percent on the Spanish lines. The abandonment rate for all NENS languages was more than 31 percent, ranging from as low as less than 8 percent on the Portuguese TFN to more than 51 percent on the Korean TFN. See Table 10 for the abandonment call volume and rates for each language.

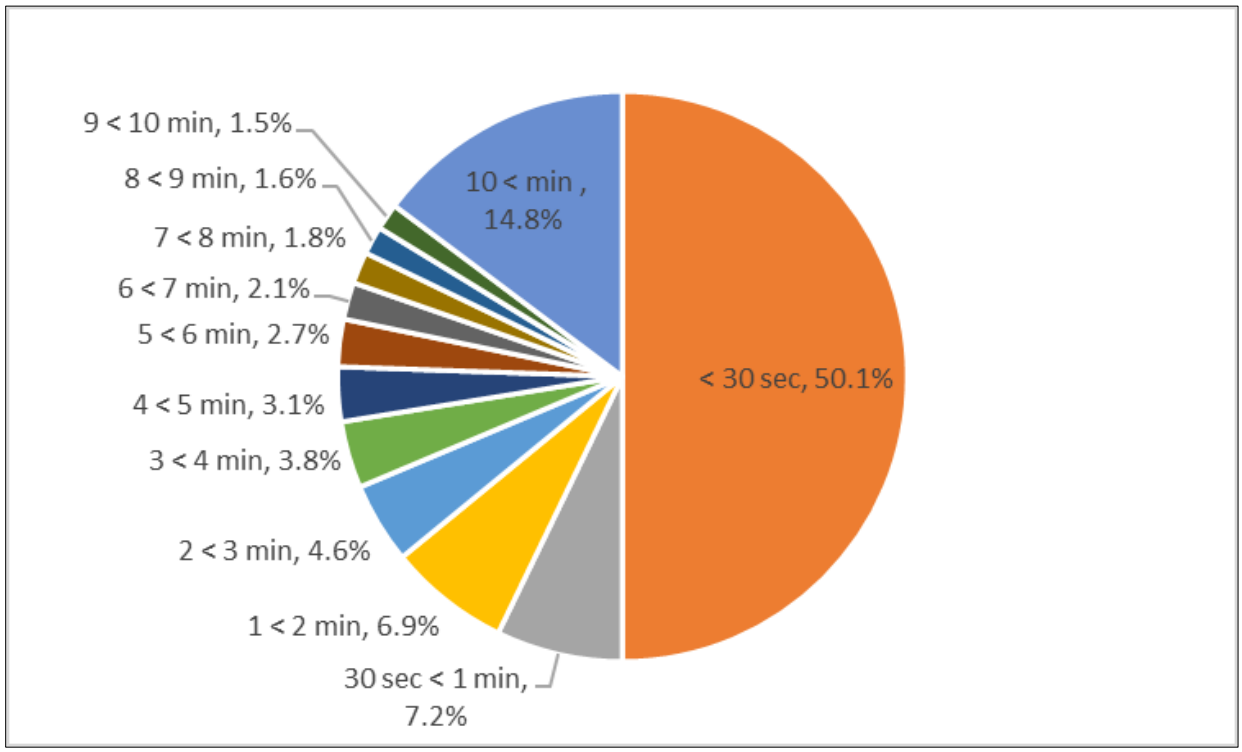
*Table 10. Inbound: Abandonment Rate by Language Line*

| Language Group | Language | Calls Offered to CSRs | Calls Abandoned | Abandonment Rate (%) |
|---|---|---|---|---|
| **Total** | | **5,210,940** | **493,937** | **9.5** |
| **English** | English | 4,641,934 | 428,534 | 9.2 |
| | English Puerto Rico | 3,805 | 337 | 8.9 |
| | **Total** | **4,645,739** | **428,871** | **9.2** |
| **Spanish** | Spanish | 379,410 | 22,288 | 5.9 |
| | Spanish Puerto Rico | 52,545 | 2,496 | 4.8 |
| | **Total** | **421,864** | **24,784** | **5.9** |
| **NENS** | Korean | 14,898 | 7,655 | 51.4 |
| | Vietnamese | 14,461 | 6,653 | 46.0 |
| | Chinese Cantonese | 11,493 | 3,788 | 33.0 |
| | Polish | 2,722 | 823 | 30.2 |
| | Japanese | 2,527 | 677 | 26.8 |
| | Tagalog | 2,926 | 697 | 23.8 |
| | Chinese Mandarin | 13,877 | 2,827 | 20.4 |
| | Arabic | 4,633 | 851 | 18.4 |
| | Russian | 7,872 | 1,068 | 13.6 |
| | French | 1,345 | 137 | 10.2 |
| | Haitian Creole | 3,256 | 320 | 9.8 |
| | Portuguese | 2,258 | 172 | 7.6 |
| | **Total** | **82,268** | **25,668** | **31.2** |
| **Other** | TTY | 45,706 | 14,269 | 31.2 |
| | GQ | 5,272 | 345 | 6.5 |
| | **Total** | **50,978** | **14,614** | **28.7** |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics Interactive; Key Metrics – Abandonment."

As shown below, more than 50 percent of calls were abandoned within 30 seconds of entering the service queue. More than 35 percent of calls were abandoned after waiting between 30 seconds and 10 minutes, and just under 15 percent of calls were abandoned after waiting at least 10 minutes to speak to a CSR. See Figure 12 for the breakdown of how long callers waited in the service queue before disconnecting, as a percentage of all abandoned calls.

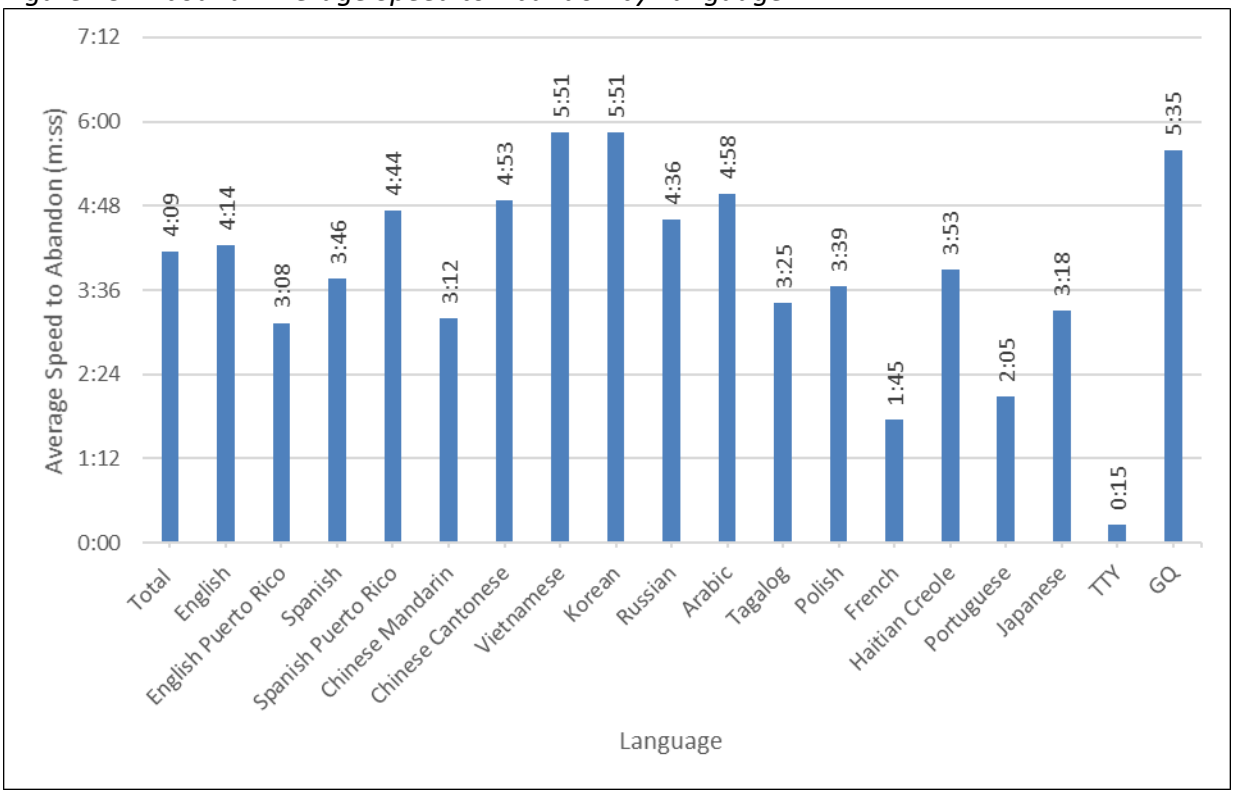
*Figure 12. Inbound: Speed to Abandon*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Adhoc – Speed to Abandon Analysis (Inbound); ASA and Call Counts by Bucket."

On average, callers who abandoned their calls in the English service queue did so after 4 minutes, 14 seconds. For the Spanish queues, the average speed to abandon was 3 minutes, 46 seconds. The average speed to abandon varied for the NENS service queues, ranging from 1 minute, 45 seconds on the French TFN to 5 minutes, 51 seconds on the Korean and Vietnamese TFNs. Figure 13 shows the average speed to abandon for each language line.

*Figure 13. Inbound: Average Speed to Abandon by Language TFN*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics Interactive; Key Metrics – Abandonment."

The average speed to answer (ASA) shows how long callers waited in the service queue before speaking to a CSR. For all languages, the ASA was 1 minute, 56 seconds. The ASA for the English stateside TFN was just over 2 minutes, while the ASA for the Spanish stateside TFN was less than 1 minute. The ASA for the Puerto Rico TFNs was only 31 seconds. 2020 Census data collection for Puerto Rico began in April, so there was not much call volume on either of the Puerto Rico language TFNs when CQA experienced its period of highest call volume in the first few weeks of operations. The ASA for the NENS TFNs varied widely, from 28 seconds for Portuguese to 6 minutes, 5 seconds for Vietnamese. Table 11 below shows the ASA for each language TFN.

*Table 11. Inbound: Average Speed to Answer (ASA) by Language*

| Language Group | Language | ASA (mm:ss) |
|---|---|---|
| **Total** | | **01:56** |
| **English** | English Puerto Rico | 00:31 |
| | English | 02:02 |
| **Spanish** | Spanish Puerto Rico | 00:31 |
| | Spanish | 00:57 |
| **NENS** | Portuguese | 00:28 |
| | French | 00:37 |
| | Haitian Creole | 00:57 |
| | Arabic | 01:10 |
| | Chinese Mandarin | 01:27 |
| | Russian | 01:27 |
| | Tagalog | 01:43 |
| | Japanese | 02:25 |
| | Chinese Cantonese | 02:45 |
| | Polish | 02:56 |
| | Korean | 05:23 |
| | Vietnamese | 06:05 |
| **Other** | TTY | 00:04 |
| | GQ | 00:51 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Intraday Queue Reporting."

Overall, 73 percent of all calls that were handled by CSRs were answered within 30 seconds of entering the calling queue. The success of reaching an agent within 30 seconds varied widely be language line. English and Spanish calls were answered within 30 seconds about 73 percent and 82 percent of the time, respectively. The NENS language lines ranged from 31 percent (Vietnamese) to nearly 78 percent (Portuguese). TTY and GQ calls were answered within 30 seconds 67 and 81 percent of the time, respectively. Table 12 below shows what percentage of calls were answered within 30 seconds for each language TFN.

*Table 12. Inbound: Calls Answered within 30 Seconds*

| Language Group | Language | % of Calls Answered within 30 Seconds |
|---|---|---|
| **Total** | | **73.1** |
| **English** | English Puerto Rico | 79.8 |
| | English | 72.8 |
| **Spanish** | Spanish | 85.3 |
| | Spanish Puerto Rico | 81.4 |
| **NENS** | Portuguese | 77.5 |
| | Haitian Creole | 75.8 |
| | French | 70.6 |
| | Russian | 67.3 |
| | Arabic | 62.8 |
| | Chinese Mandarin | 59.7 |
| | Tagalog | 55.7 |
| | Japanese | 53.8 |
| | Polish | 45.4 |
| | Chinese Cantonese | 45.3 |
| | Korean | 31.9 |
| | Vietnamese | 31.1 |
| **Other** | GQ | 80.7 |
| | TTY | 66.9 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics Interactive; Key Metrics – Abandonment."

The CQA contract's SLA for answering inbound calls within 30 seconds was set at 80 percent program-wide, measured weekly. CQA achieved its 80 percent SLA goal in 28 out of 32 weeks of production. CQA failed to achieve this SLA in the first four weeks of the program (March 9 to April 4, 2020). See Figure 56 in Appendix B for a complete breakdown of the percentage of calls answered within 30 seconds, by language and operational week.

6. What was the AHT by language line and by call outcome (disposition)?

*Calls Handled = Calls Offered – Calls Abandoned*

More than 4.7 million inbound calls were handled by CSRs (90.5 percent of all calls offered). The English TFNs accounted for more than 89 percent of all calls handled, and the Spanish language TFNs made up just under 9 percent of all calls handled. More than 1 percent of handled calls were from the NENS TFNs, and TTY and GQ accounted for less than 1 percent of handled calls. See Table 13 for a breakdown of calls handled by language line as a percentage of all calls handled.

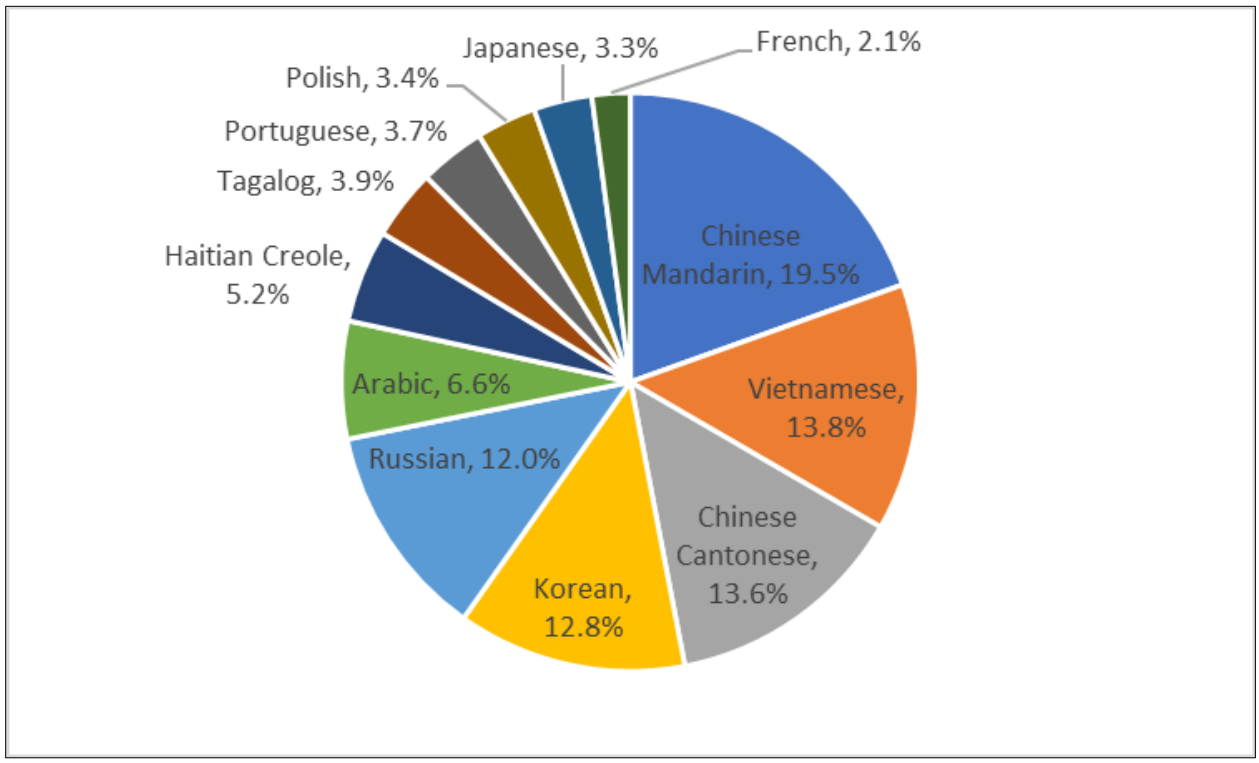
*Table 13. Inbound: Calls Handled by CSRs by Language*

| Language Group | Language | # of Calls Handled by CSRs | % of All Calls Handled |
|---|---|---|---|
| **Total** | | **4,717,003** | **100.0** |
| **English** | English | 4,123,400 | 89.3 |
| | English Puerto Rico | 3,468 | 0.1 |
| | **Total** | **4,216,868** | **89.4** |
| **Spanish** | Spanish | 357,122 | 7.6 |
| | Spanish Puerto Rico | 50,049 | 1.1 |
| | **Total** | **407,171** | **8.6** |
| **NENS** | Chinese Mandarin | 11,050 | 0.2 |
| | Vietnamese | 7,808 | 0.2 |
| | Chinese Cantonese | 7,705 | 0.2 |
| | Korean | 7,243 | 0.2 |
| | Russian | 6,804 | 0.1 |
| | Arabic | 3,782 | 0.1 |
| | Haitian Creole | 2,936 | 0.1 |
| | Tagalog | 2,229 | 0.0 |
| | Portuguese | 2,086 | 0.0 |
| | Polish | 1,899 | 0.0 |
| | Japanese | 1,850 | 0.0 |
| | French | 1,208 | 0.0 |
| | **Total** | **56,600** | **1.2** |
| **Other** | TTY | 31,437 | 0.7 |
| | GQ | 4,927 | 0.1 |
| | **Total** | **36,364** | **0.8** |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Call Statistics Language Breakout (Date Filter); Inbound: Call Statistics by Language – PTD."

Of the 56,600 calls handled across the NENS language lines, nearly 20 percent were made on the Chinese Mandarin line. Conversely, only 2 percent of calls handled on the NENS lines arrived from the French language TFN. Figure 14 shows each language line as a percentage of all NENS calls handled.

*Figure 14. Inbound: Percentage of NENS Calls Handled by Language Line*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Call Statistics Language Breakout (Date Filter); Inbound: Call Statistics by Language – PTD."

*AHT = Total Handle Time / # of Calls Handled*

AHT is the average duration of time that CSRs spent handling calls. Handle time is the sum of talk time, hold time, and work time for any individual call. The AHT for all inbound calls answered by CSRs was 9 minutes, 24 seconds, which was higher than the planned AHT of 8 minutes per call. Of the calls made on the NENS TFNs, Tagalog was the language with the highest AHT of more than 16 minutes, and Japanese had the lowest AHT of less than 12 minutes. The inbound AHT for each language is shown below in Table 14.

*Table 14. Inbound: Average Handle Time (AHT) of Inbound Calls*

| Language Group | Language | AHT (mm:ss) |
|---|---|---|
| **Total** | | **09:24** |
| **English** | English Puerto Rico | 09:43 |
| | English | 08:54 |
| **Spanish** | Spanish | 15:09 |
| | Spanish Puerto Rico | 12:22 |
| **NENS** | Tagalog | 16:17 |
| | Portuguese | 15:44 |
| | Haitian Creole | 15:13 |
| | French | 14:48 |
| | Chinese Cantonese | 13:51 |
| | Vietnamese | 13:46 |
| | Arabic | 13:27 |
| | Russian | 13:00 |
| | Chinese Mandarin | 12:42 |
| | Korean | 12:25 |
| | Polish | 12:07 |
| | Japanese | 11:51 |
| **Other** | GQ | 05:22 |
| | TTY | 00:57 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound: Call Statistics by Language – PTD."

The AHT for all handled calls was 9 minutes, 24 seconds, however, AHT is best analyzed when broken down by the call disposition. The outcomes of inbound calls to CQA were based on the call disposition selected by CSRs at the conclusion of the call. This measure is not the same as call reason. A caller may call CQA with a general inquiry but may wind up completing their census over the phone with a CSR, which would make the outcome of the call to an enumeration.

More than 53 percent of CSR-handled calls were dispositioned as enumerations and 36 percent were dispositioned as general assistance calls. Less than 1 percent of calls ended because of technical issues, and CSRs did not choose a call disposition on 2 percent of calls. Less than 1 percent of calls were dispositioned as "other," which included complaints, abusive callers, Robocalls, inquiries from the media, and threats. The remaining calls ended because the call was disconnected or dropped, the caller stopped responding, or there was a language barrier.

Of the nearly 93 percent of handled calls dispositioned as either enumerations or general assistance calls:

- The AHT of enumeration calls was 13 minutes, 43 seconds.
- The AHT of general assistance calls was 4 minutes, 32 seconds.

Table 15 below breaks out the percentage of calls by disposition as well as the AHT of each disposition.

*Table 15. Inbound: Call Dispositions*

| Call Disposition | % of All Calls | AHT (mm:ss) |
|---|---|---|
| **Total** | **100.0** | **09:24** |
| Enumeration | 53.6 | 13:43 |
| General Assistance | 36.1 | 04:32 |
| Hang up / Disconnect / Dropped Call / Caller Stopped Responding / Language Barrier | 7.0 | 03:43 |
| None Selected | 2.1 | 04:07 |
| Technical Issue | 0.8 | 04:58 |
| Other (Complaint, Abusive Caller, Robocall, Threat, Media Call) | 0.5 | 06:45 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "AHT and Call Volume by Day and Hour."

It should be emphasized that call dispositions are selected by the CSRs, and therefore some degree of error is expected. To mitigate this, selecting the correct call disposition is part of the CSR quality monitoring scorecard.

7. How many enumerations were completed, and what was the AHT for enumerations in each language?

For all languages, CSRs dispositioned nearly 54 percent of calls as enumerations. For the English and Spanish language lines, the following is the breakdown of the percentage of calls dispositioned as enumeration:

- English – 53 percent
- English Puerto Rico – 40 percent
- Spanish – 63 percent
- Spanish Puerto Rico – 56 percent

The percentage of calls dispositioned as enumerations varies among the NENS languages, from a high of 65 percent on the Korean line to a low of 46 percent on the Arabic line.

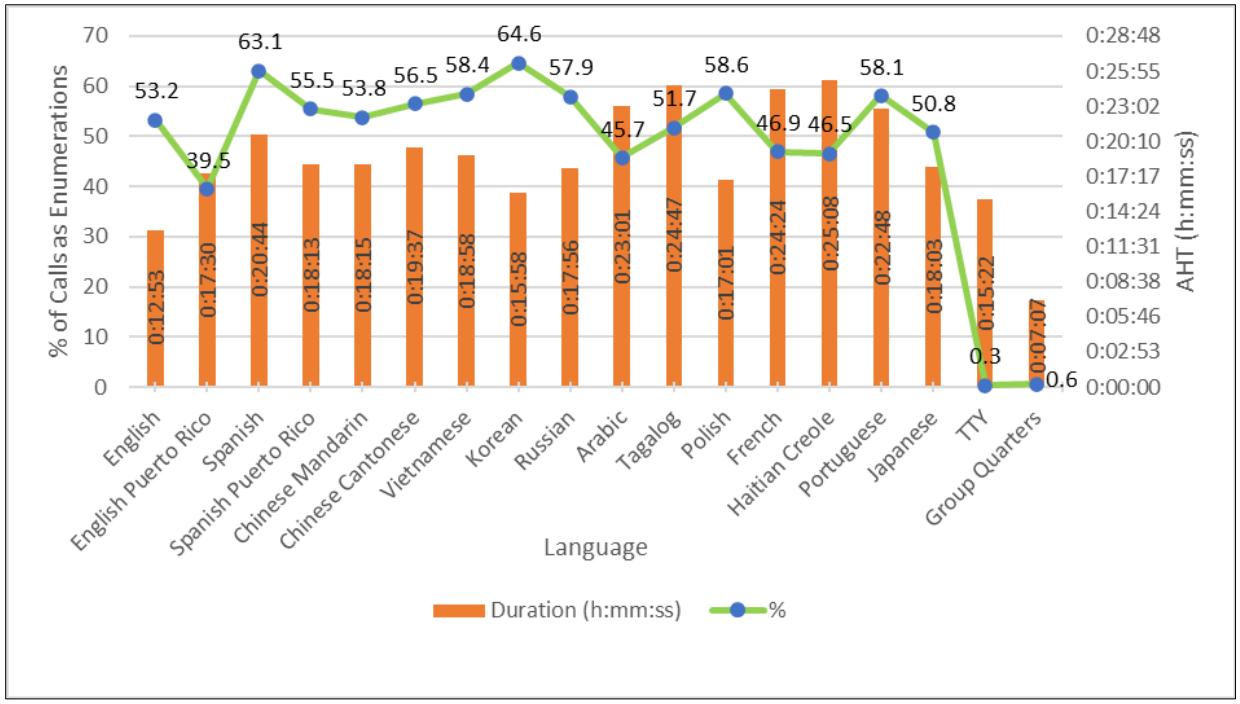
The enumeration rate for TTY was 0.3 percent, which indicates the high volume of calls that were made in error on the TTY TFN. Included in the volume of calls dispositioned as enumerations is GQ (0.6 percent). The support that CQA offered to the GQ operation was for general assistance only, therefore, these calls were erroneously dispositioned as enumerations.

The AHT for enumerations differed widely across all languages. The AHTs for enumerations on the English and Spanish language lines were the following:

- English – 12 minutes, 53 seconds
- English Puerto Rico – 17 minutes, 30 seconds
- Spanish – 20 minutes, 44 seconds
- Spanish Puerto Rico – 18 minutes, 13 seconds

The AHTs for enumerations for the NENS languages ranged from just under 16 minutes on the Korean line to more than 25 minutes on the Haitian Creole line. See Figure 15 for a comparison of the percentage of calls dispositioned as enumeration and the AHTs for each language.

*Figure 15. Inbound: AHT and Percentage of Calls Dispositioned as Enumerations by Language*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "AHT and Call Volume by Day and Hour."

8. What were the demographics (sex, age, Hispanic origin, and race) of the respondent completing the census questionnaire over the phone?

Just over 2 million enumerations were completed over the phone. As shown in Table 16, nearly 61 percent of respondents identified as female, and more than 37 percent identified as male. 1.7 percent of respondents did not report their sex.

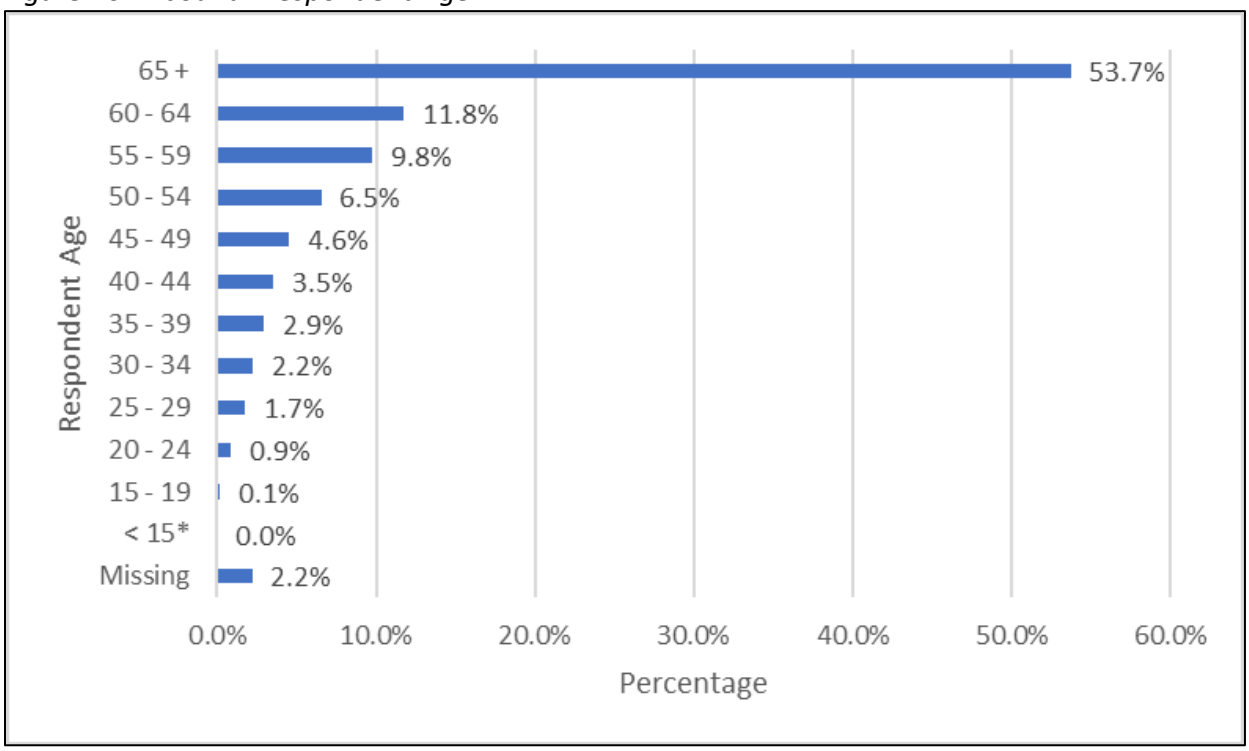
*Table 16. Inbound: Respondent Sex*

| Sex | # of Cases | Percentage (%) |
|---|---|---|
| **Total** | **2,070,921** | **100.0** |
| Male | 774,117 | 37.4 |
| Female | 1,261,161 | 60.9 |
| Missing | 35,643 | 1.7 |

Source: U.S. Census Bureau, 2020 Census Decennial Response File.
Note: The data in this table have been rounded or injected with noise as part of the Census Bureau's approved disclosure avoidance practices applied to this report.

In looking at respondent age, the percentage of census questionnaire responses received over the phone increased by age bracket. Nearly 54 percent of phone responses originated from respondents age 65 and over. This is in alignment with results from recent census tests and makes sense given that the older population is less likely to respond on the internet. See Figure 16 below for a breakdown of respondents by age bracket.

*Figure 16. Inbound: Respondent Age*




Source: U.S. Census Bureau, 2020 Census Decennial Response File.
Note: The data used to create this figure have been rounded or injected with noise as part of the Census Bureau's approved disclosure avoidance practices applied to this report.

As shown in Table 17, 16.4 percent of respondents reported being of Hispanic origin, and 80.7 percent of respondents reported being non-Hispanic. Nearly 3 percent of respondents did not respond to the Hispanic origin question.

*Table 17. Inbound: Respondent Hispanic Origin*

| Hispanic Origin | # of Cases | Percentage (%) |
|---|---|---|
| **Total** | **2,070,976** | **100.0** |
| Hispanic | 340,675 | 16.4 |
| Non-Hispanic | 1,670,619 | 80.7 |
| Missing | 59,682 | 2.9 |

Source: U.S. Census Bureau, 2020 Census Decennial Response File.
Note: The data in this table have been rounded or injected with noise as part of the Census Bureau's approved disclosure avoidance practices applied to this report.

Table 18 below shows the breakdown of reported races for respondents completing the census questionnaire over the phone. Nearly two-thirds (66.4 percent) of respondents reported their race as White. Nearly 17 percent of respondents identified as Black. Three percent of respondents identified as Asian, 1.5 percent as American Indian or Alaska Native, and 0.2 percent identified as Native Hawaiian or Other Pacific Islander. Those who identified as more than one race made up 2.6 percent of respondents, and 4.6 percent of respondents identified being some other race not listed as an option. More than 5 percent of respondents were missing a response to the race question.

*Table 18. Inbound: Respondent Race*

| Race | # of Cases | Percentage (%) |
|---|---|---|
| **Total** | **2,070,851** | **100.0** |
| White | 1,375,490 | 66.4 |
| Black | 345,363 | 16.7 |
| American Indian or Alaska Native | 30,547 | 1.5 |
| Asian | 62,328 | 3.0 |
| Native Hawaiian or Other Pacific Islander | 4,009 | 0.2 |
| Some Other Race | 94,605 | 4.6 |
| More than One Race | 53,709 | 2.6 |
| Missing | 104,800 | 5.1 |

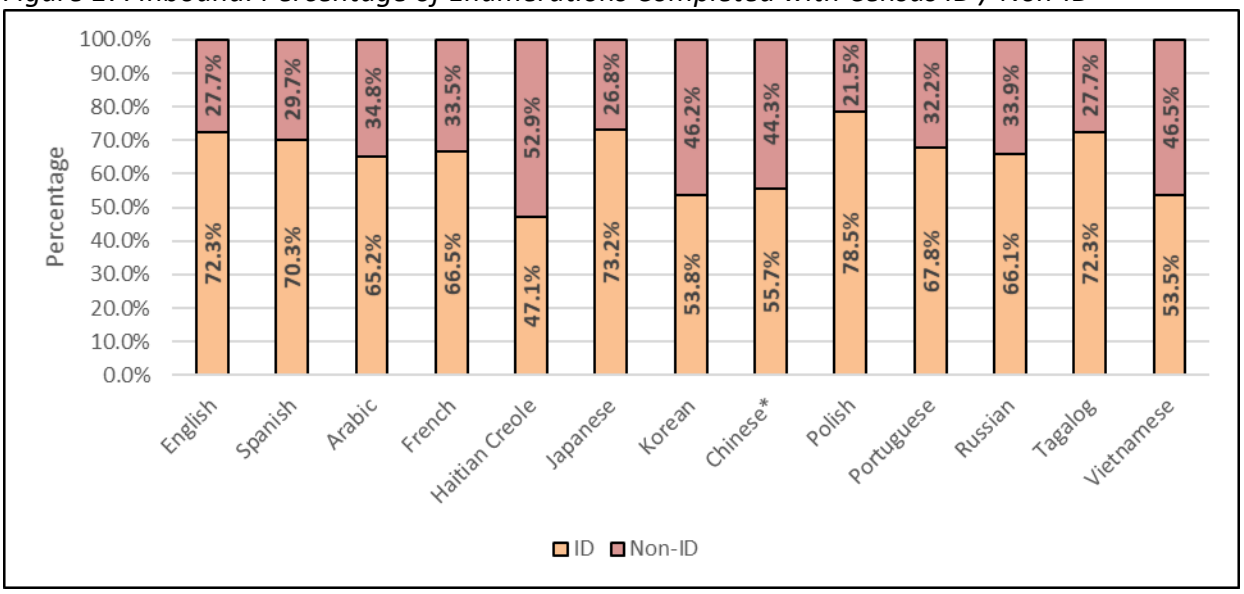
Source: U.S. Census Bureau, 2020 Census Decennial Response File.
Note: The data in this table have been rounded or injected with noise as part of the Census Bureau's approved disclosure avoidance practices applied to this report.

9. What percentage of responses were submitted with and without a Census ID?

Overall, 71.9 percent of responses received via phone were completed with a valid Census ID, and 28.1 percent were completed without a Census ID (i.e., Non-ID). The share of respondents who completed the census questionnaire over the phone with a Census ID on the English and Spanish language lines was 72.3 percent and 70.3 percent, respectively. Those completing the

questionnaire with a Census ID for the NENS languages ranged from 47.1 percent for Haitian Creole to 78.5 percent for Polish. See Figure 17 for a breakdown of enumerations completed with and without a Census ID by language.

*Figure 17. Inbound: Percentage of Enumerations Completed with Census ID / Non-ID*




*The data source includes both Mandarin and Cantonese together as Chinese for reporting purposes.
Source: U.S. Census Bureau, 2020 Census Decennial Response File.

### 5.1.2 *Inbound Callback Requests*

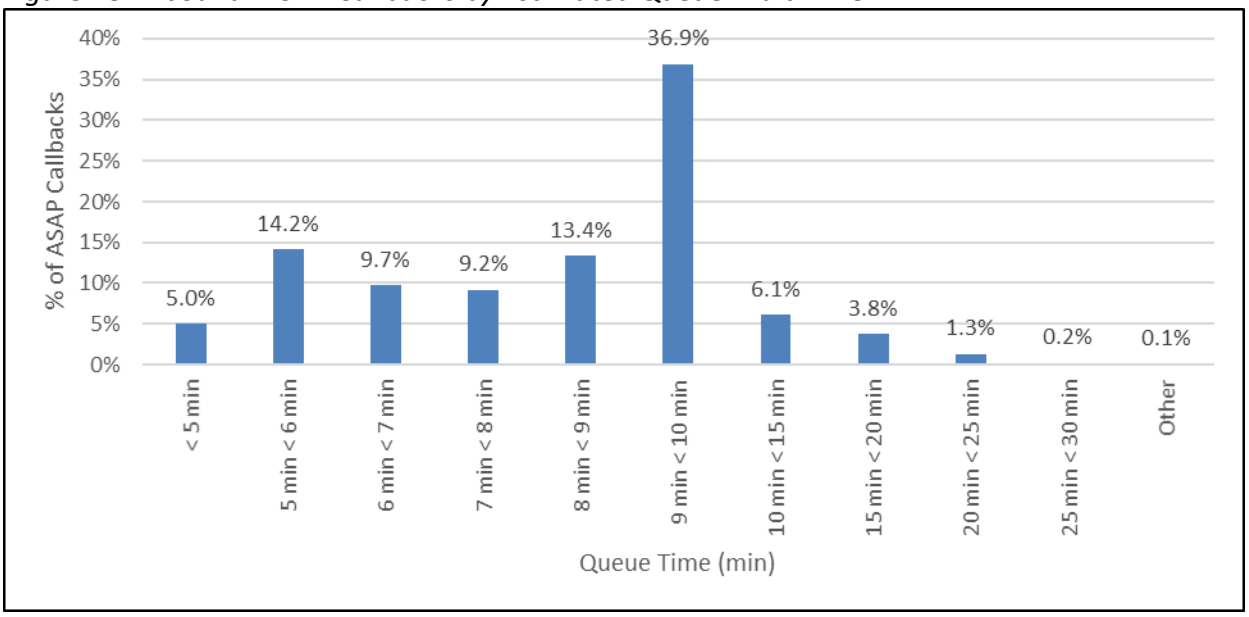
10. How many ASAP Callback requests did CQA receive, and what was the estimated wait time (EWT) to receive a callback?

During the 2020 Census, ASAP Callback was offered when the wait time to speak to a CSR on the English or Spanish lines was over an established threshold. The ASAP Callback offer was made in the IVR after the caller asked to speak to a CSR and before entering the calling queue. Instead of waiting in the service queue, callers received a callback at their phone number when it would have been their turn had they stayed in the calling queue. The ASAP Callback functionality was turned off on March 30, 2020, because requests for callbacks were causing unanticipated operational issues with the system. After some additional analysis and testing, ASAP Callbacks were offered again on July 24, 2020, and periodically during periods of high call volume through the end of September 2020.

Throughout operations, 57,453 ASAP Callbacks were requested, with nearly 84 percent of them occurring in March 2020. More than 83 percent of callers who elected to receive an ASAP Callback were given estimated wait times between 5 and 10 minutes. See Figure 18 for a

breakdown of the estimated wait times given to callers who requested to receive an ASAP Callback.

*Figure 18. Inbound: ASAP Callbacks by Estimated Queue Wait Time*




Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Inbound – Humanify Callback Detail – PTD."

11. How many Scheduled Callback requests did CQA receive (IVR Callbacks)?

CQA received 66,194 requests for Scheduled Callbacks. Because of high call volume and reduced staffing because of COVID-19 staffing restrictions at the CQA call centers, the Census Bureau's MQA operation assisted CQA with Scheduled Callbacks on the English and Spanish lines. From April 11 through June 11, 2020, MQA responded to 12,441 callback requests. During the entire operation, CQA responded to 53,753 callback requests. See Table 19 for a complete breakdown of Scheduled Callback requests by language line.

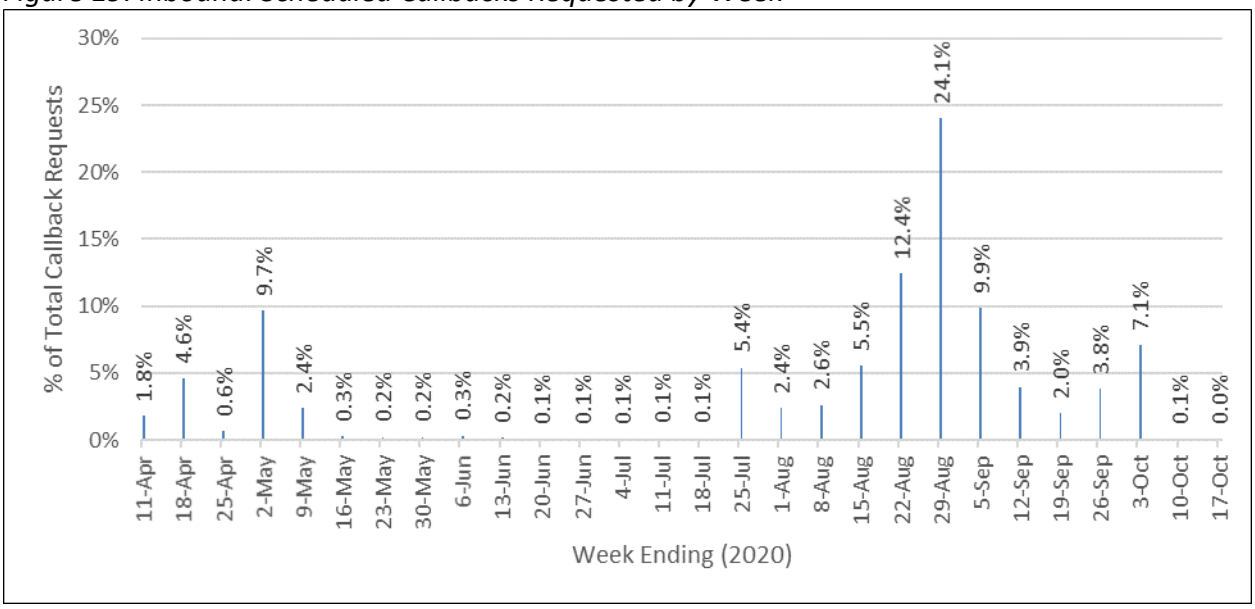
*Table 19. Inbound: Scheduled Callback Requests by Language*

| Scheduled Callback Language | # Callbacks Requested |
|---|---|
| **Total** | **66,194** |
| **CQA Scheduled Callback Requests** | **53,753** |
| English* | 50,663 |
| Spanish* | 1,671 |
| Chinese Mandarin | 269 |
| Chinese Cantonese | 189 |
| Vietnamese | 246 |
| Korean | 236 |
| Russian | 138 |
| Arabic | 135 |
| Tagalog | 25 |
| Polish | 39 |
| French | 18 |
| Haitian Creole | 58 |
| Portuguese | 44 |
| Japanese | 22 |
| **MQA – English & Spanish**** | **12,441** |

*Includes stateside and Puerto Rico.
**MQA reported combined figures for English and Spanish.
Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Intraday Reporting: CQA Inbound Callback Requests by Language."

Scheduled Callback requests were offered during periods of high call volume beginning April 7 through October 14, 2020. More than 79 percent of all Scheduled Callback requests were made after July 18, 2020, which was around the time the NRFU operation began its soft launch. The week ending August 29, 2020, received more than 24 percent of all Scheduled Callback requests, which coincided with the peak of inbound calls received during NRFU field operations. Figure 19 shows Scheduled Callbacks by week as a percentage of total callback requests.

*Figure 19. Inbound: Scheduled Callbacks Requested by Week*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Intraday Reporting: CQA Inbound Callback Requests by Language."

12. What were the outcomes of ASAP and Scheduled Callback requests?

More than 4.6 percent of ASAP Callback requests failed when the dialer attempted to call the phone number provided by the respondent. These failures may have been because of an invalid phone number or a busy signal, for example. The failed callbacks may have also been during times of extremely high call volume, when ASAP Callback requests created a backlog.

Of the remaining 54,803 ASAP Callbacks that were attempted by CSRs:

- 37 percent were dispositioned as enumerations.
- 32 percent were dispositioned as general assistance.
- 23 percent were dispositioned as calls where either the respondent could not be reached, no longer needed assistance, or disconnected the call.
- Less than 1 percent were dispositioned as robocalls, threats, complaints, or media calls.
- Less than 1 percent were dispositioned as calls ending because of technical issues.

See Table 20 for a full breakdown of ASAP Callback dispositions.

*Table 20. Inbound: ASAP Callback Dispositions*

| Call Disposition | # ASAP Callback Requests | % of ASAP Callback Requests |
|---|---|---|
| **Total** | **57,453** | **100.0** |
| **System Failed to Connect** | **2,650** | **4.6** |
| **CSR Disposition** | **54,803** | **95.4** |
| Enumeration | 21,137 | 36.8 |
| General Assistance | 18,198 | 31.7 |
| No Answer / Hang up / Language Barrier / Do Not Call / Refusal / Assistance No Longer Needed | 13,111 | 22.8 |
| None Selected | 1,594 | 2.8 |
| Technical Issue | 388 | 0.7 |
| Other (Robocall, Threat, Complaint, Abusive Caller, Media Call) | 375 | 0.7 |

Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Inbound – Humanify Callback Detail – PTD."

The CSR dispositioning of Scheduled Callbacks was set up differently than ASAP Callbacks, but comparisons of the outcomes of each can be made:

- 36 percent were dispositioned as enumerations.
- 6 percent were dispositioned as general assistance.
- 31 percent were dispositioned as calls where the respondent could not be reached, or the callback number provided was invalid.
- 27 percent were dispositioned as no longer needing assistance.

The percentage of Scheduled Callbacks resulting in enumerations was nearly the same as ASAP Callbacks. When Scheduled Callbacks were offered, the message to callers specifically mentions that the callback offer was for those respondents who needed help completing their census questionnaire, and if general assistance was needed, they should wait to speak to a CSR. In total, Scheduled Callbacks were dispositioned as enumeration or general assistance 41 percent of the time. Because callers waited up to a few days before receiving their Scheduled Callbacks, it is not surprising that nearly 27 percent of calls were dispositioned as the respondent no longer needing assistance. More than 31 percent of scheduled callbacks ended up not reaching the intended respondent. See Table 21 for a breakdown of Scheduled Callback dispositions made by CSRs.

*Table 21. Inbound: Scheduled Callback Dispositions by CQA CSRs*

| Call Disposition | # Scheduled Callbacks Received | % of Total Scheduled Callbacks |
|---|---|---|
| **Total** | **53,753** | **100.0** |
| Enumeration | 19,446 | 36.2 |
| General Assistance | 3,098 | 5.8 |
| No Answer / Language Barrier / Do Not Call / Refusal / Wrong # / # Not in Service | 16,836 | 31.3 |
| Assistance No Longer Needed | 14,373 | 26.8 |

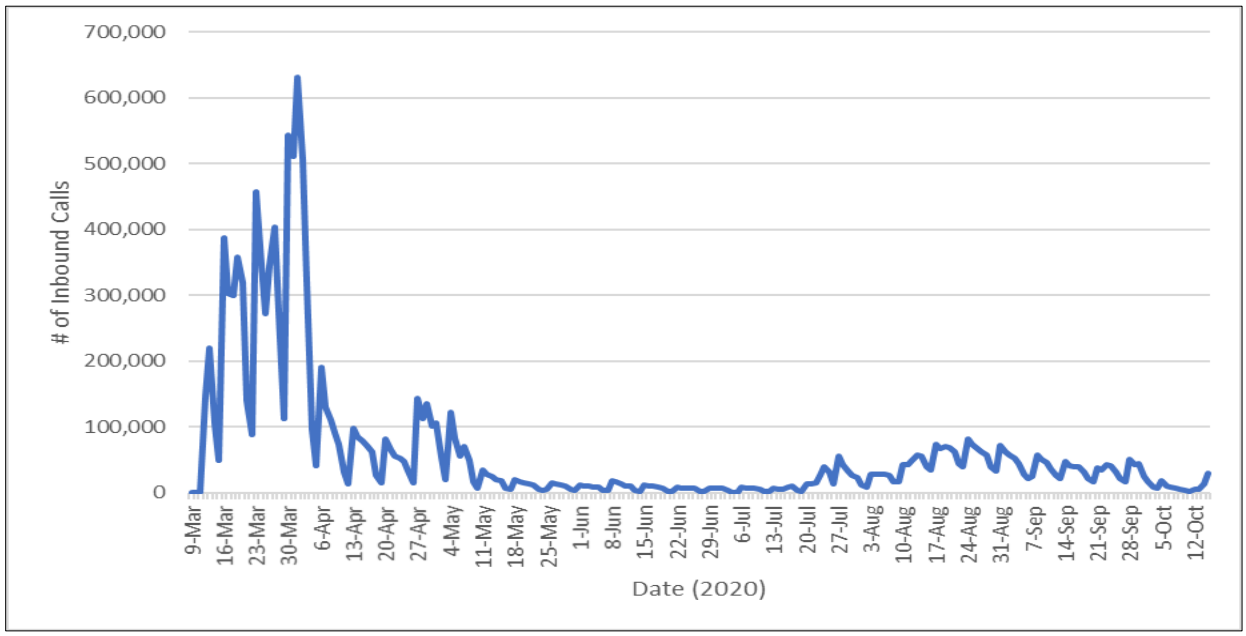
Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Intraday Reporting."

### 5.1.3 *Inbound Call Patterns*

13. What was inbound call volume like over the course of CQA operations?

CQA received more than 53 percent of the nearly 13.5 million inbound calls during the first four weeks of operations (March 9 – April 4, 2020). Inbound call volume decreased until the last week of April, when there was an uptick in call volume. Calls decreased throughout the months of May and June and increased again from the end of July through the end of August. Beginning in September, weekly call volume decreased until mid-October. The uptick in calls received during the last week of operations can be attributed to people calling CQA to check if their completed questionnaires were received, or to enumerate. Figure 20 shows daily call volume from March 9 to October 15, 2020. Factors that address call volume over the course of the CQA operation are discussed in question 14.

*Figure 20. Inbound: Daily Call Volume*



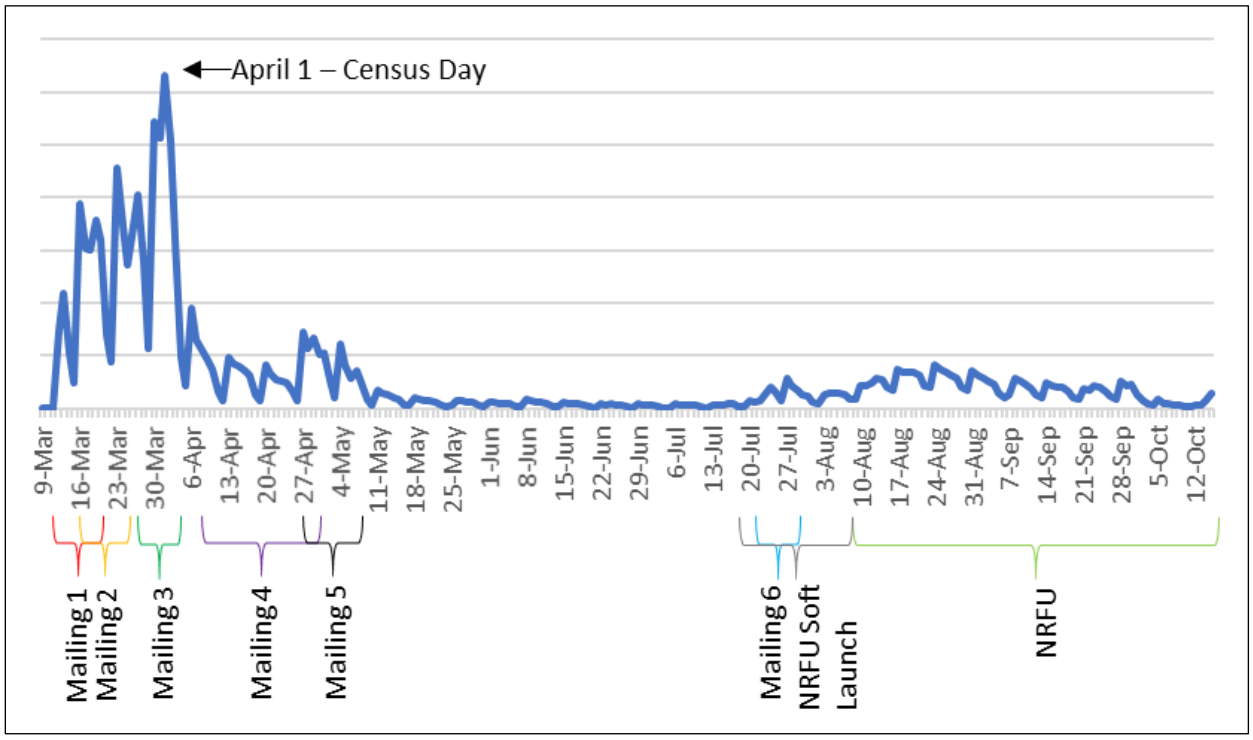

Source: Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics Interactive: Inbound Call Volume Detail."

14. What call patterns were experienced related to the 2020 Census mailing schedule and Nonresponse Followup (NRFU) operation?

The 2020 Census mailing and NRFU schedule were the most important drivers of call volume to CQA. The Census Bureau made a robust attempt to contact all households to ensure their census responses were completed. As part of the mailing strategy, the Census Bureau sent up to seven separate mailings to households. The first two mailings were sent to all households, regardless of whether the respondent completed the census after receiving the first mailing. Over the course of the following few months, nonresponding households received upwards of four additional mailings encouraging them to self-respond before the Census Bureau attempted to collect responses in-person as part of the NRFU operation. After the sixth mailing, the NRFU operation began. An unplanned seventh mailing, which was added as a result of the COVID-19 pandemic and included a paper questionnaire, went out at the end of August/beginning of September and was sent primarily to areas with the lowest response rates.

Figure 21 below shows the relationship between peaks in call volume and the dates households received mailings. Nearly 90 percent of inbound calls to CQA were received during one of the in-home mailing dates or during the NRFU operation.

*Figure 21. Inbound: Call Volume by Week and Mailing / Outreach Strategy*




Source: Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics Interactive: Inbound Call Volume Detail."

All households received the initial survey invitation (Mailing 1) between March 12 and March 20, which drove initial call volume. Regardless of whether households responded to the initial survey invitation, all households received a reminder letter (Mailing 2) between March 16 and March 24. These two initial mailings to all households resulted in CQA receiving at least 3.2 million calls (23.9 percent of total calls).

Households that did not complete their census questionnaires after the first two mailings received a reminder postcard (Mailing 3) between March 26 and April 3. During these dates, CQA received 3.7 million additional calls (27.1 percent of all calls). Calls received during these dates were also likely driven from the previous two letters sent to all households. Census Day was April 1, which had the highest single day total of 631,759 inbound calls received (4.7 percent of all calls).

Beginning April 8 through the end of April, households that had not completed their census were mailed a paper questionnaire (Mailing 4). CQA experienced a decrease in weekly call volume throughout April, as those who were waiting to receive a paper questionnaire began to receive them. The increase in call volume at the end of April through the beginning of May can be attributed to a second reminder postcard (Mailing 5), which was sent to nonresponding households. The total call volume received during the in-home dates for Mailings 4 and 5 was 2.2 million (16.1 percent of all calls).

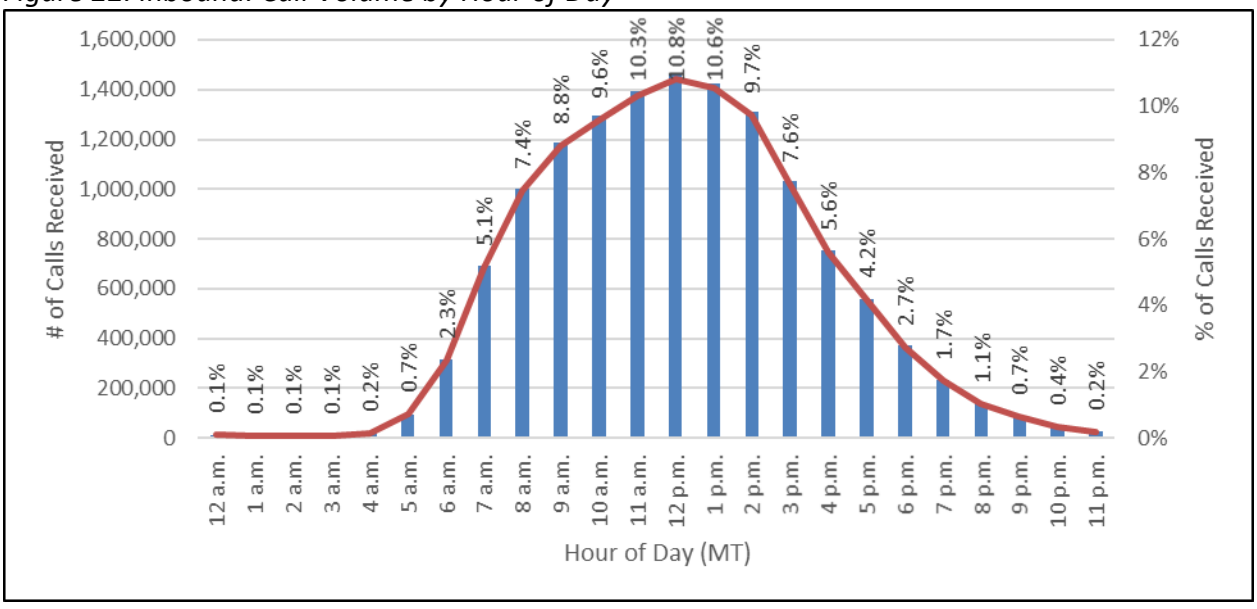
The final reminder letter (Mailing 6) was sent to households that had not responded, between July 22 and July 28. This letter encouraged respondents to complete their census questionnaire before the NRFU operation begins to avoid receiving a home visit from an enumerator. During this time through the beginning of August, the NRFU operation began a soft launch of at-home visits in some geographical areas, which was rolled out to additional geographical areas on a weekly basis. NRFU began nationwide on August 9, 2020, and continued through the end of the CQA operation in mid-October (Census Bureau, 2020). From the time households received the pre-NRFU reminder letter, through the remainder of the NRFU operation, CQA received more than 3 million calls (22.8 percent of all calls).

15. Which hours of the day and days of the week received the highest call volume?

CQA received 99.6 percent of inbound calls during business hours, which were 5 a.m. to midnight Mountain Time (MT)[20]. Between 5 a.m. and 1 p.m., call volume steadily increased every hour, from 0.7 percent to 10.8 percent of all calls. From 1 p.m. through midnight, calls steadily decreased every hour from 10.6 percent to 0.2 percent of all calls.

CQA received 51 percent of calls between 10 a.m. and 3 p.m. MT. Calls received before 10 a.m. accounted for 25 percent of all calls, and those received after 3 p.m. accounted for 24 percent. Figure 22 shows inbound call volume by hour as a percentage of all calls received.

*Figure 22. Inbound: Call Volume by Hour of Day*

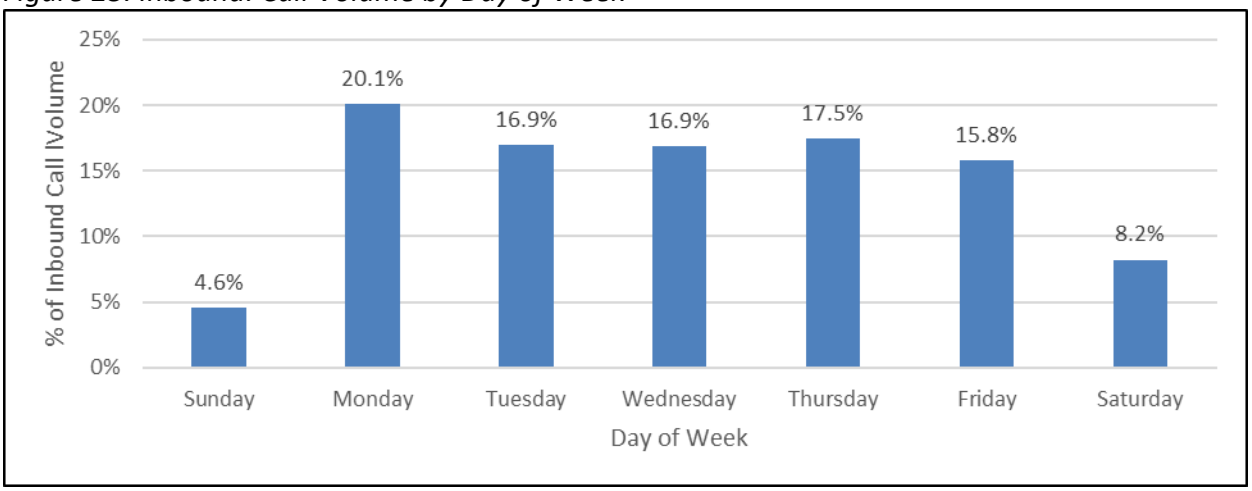



Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Intraday Reporting: Inbound Call Volume Detail – Intraday."

[20] For reporting purposes, all data in this assessment are reported in Mountain Time (MT). Since CQA call centers operated from 7 a.m. to 2 a.m., Eastern Time (ET), CQA used MT to ensure reporting captured the operational day.

CQA received more than 87 percent of inbound calls on weekdays (Monday through Friday), and 13 percent of calls on Saturday and Sunday. Mondays received the greatest volume of calls (20.1 percent), and the Sundays received the fewest calls (4.6 percent). Figure 23 shows call volume received each day, as a percentage of all inbound call volume.

*Figure 23. Inbound: Call Volume by Day of Week*




Source: Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Key Metrics Interactive: Inbound Call Volume Detail."

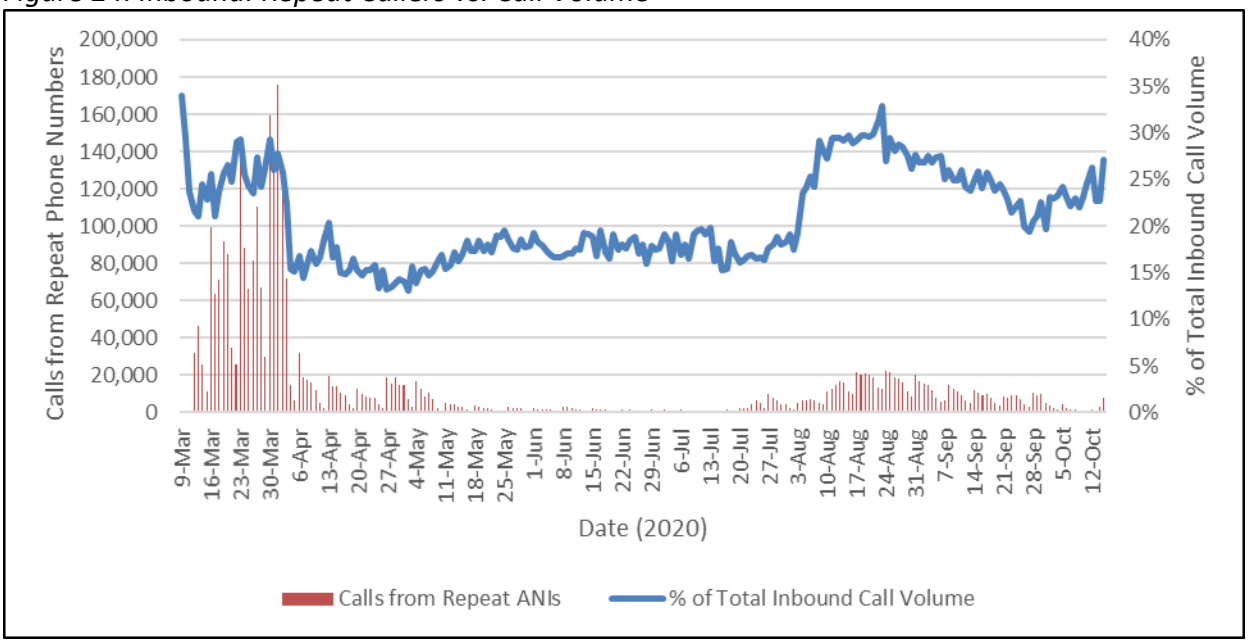
16. How often did CQA receive calls from repeat callers?

Repeat callers are phone numbers that called the same TFN on the same operational day more than one time. Over the course of data collection, more than 20 percent of total inbound calls to CQA were from phone numbers that had previously contacted CQA. Figure 24 below shows two peaks of repeat callers in March and August 2020, which were also when CQA experienced peak call volume.

The high call volume in March 2020 came at a time when CQA implemented a reduced staffing model of 50 percent CSR capacity to adhere to social distancing guidelines because of the COVID-19 pandemic. Reduced staffing at call centers caused longer wait times for callers to speak to a CSR. Rather than wait for extended periods of time to speak to a CSR, many callers decided to hang up (abandon) and call back at another time.

The delivery of the final reminder pre-NRFU letter (Mailing 6) as well as the rollout of the NRFU operation also caused a large spike in the percentage of calls from repeat callers. August 23, 2020, saw the highest percentage of calls from repeat callers (33 percent of calls received), which was also during the peak of NRFU data collection. During this period, CQA also received high call volume which may have caused callers to hang up and retry their calls instead of waiting in a longer service queue to speak to a CSR.

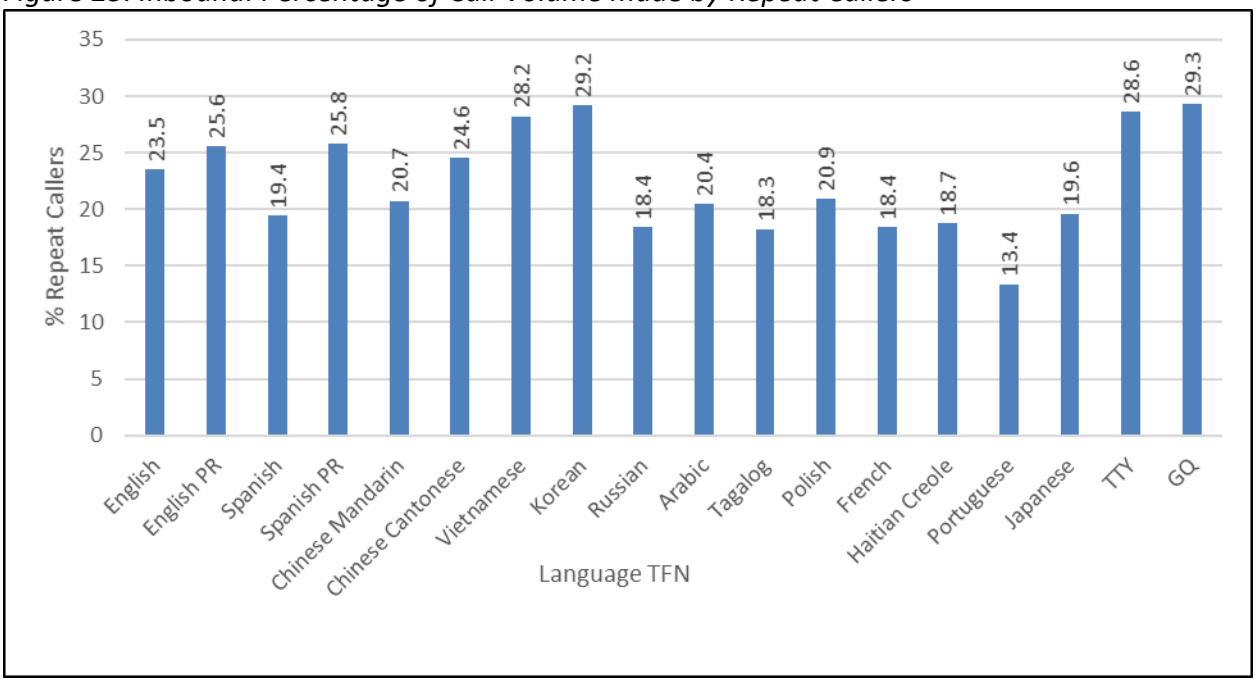
*Figure 24. Inbound: Repeat Callers vs. Call Volume*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Repeat Caller Analysis – Inbound."

Nearly 24 percent of calls on the English line were from repeat callers. For Spanish, that number drops to less than 20 percent. Repeat callers on the NENS language lines ranged from 13 percent on the Portuguese line to 29 percent on the Korean line. See Figure 25 for a breakdown of the percentage of total calls in each language line from repeat callers.

*Figure 25. Inbound: Percentage of Call Volume made by Repeat Callers*



Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Repeat Caller Analysis – Inbound."

Aside from legitimately needing CQA assistance on more than one occasion on the same day, respondents may have called the CQA more than once for several reasons, including:

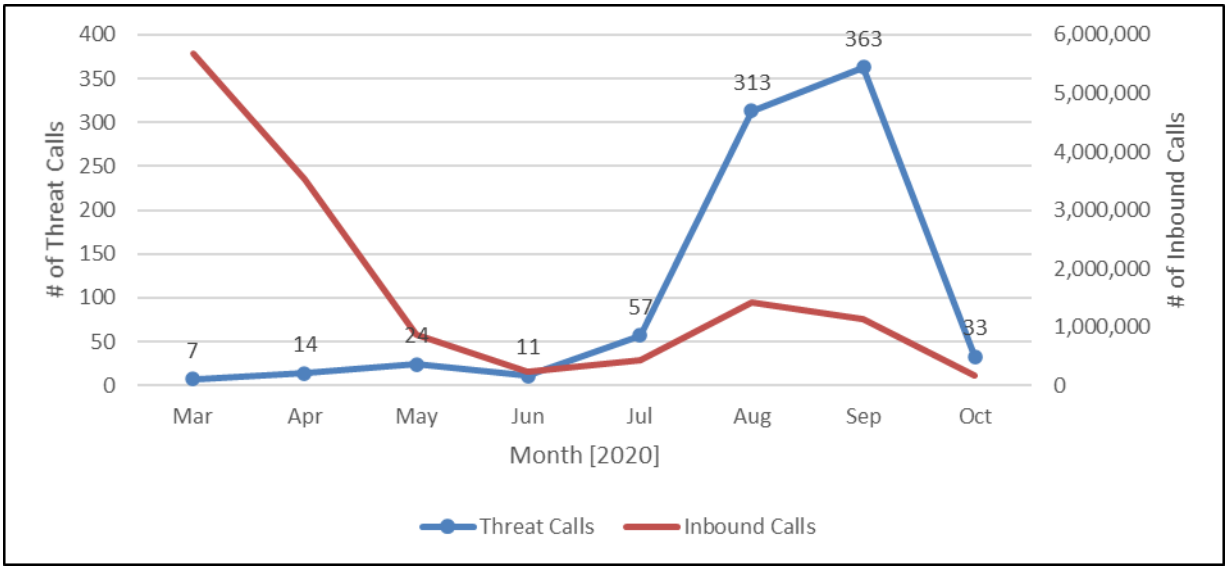
- Respondent called during a period of high call volume and decided to call back at another time instead of opting to receive a Scheduled or ASAP Callback.
- Respondent abandoned a call while waiting in the service queue and called back at another time.
- Respondent called outside of CQA business hours. At the end of March, NENS business hours were reduced to 6 a.m. to 8 p.m. MT, Monday through Friday.
- Respondent called CQA to make a threat against a NRFU enumerator.

17. How often did CQA receive threat calls?

CQA received an unexpectedly high volume of threat calls during the 2020 Census. If CSRs received a call and the respondent threatens potential harm to others, the CSR would raise a red flag and a supervisor would standby to assist if needed. If the call was indeed a threat, CSRs would disposition the call as such, and the CQA operations team listened to the call recording to verify the call constituted a true threat. Most of the threat calls CQA received were directed toward NRFU enumerators visiting housing units in-person to collect data.

CQA received 822 threat calls during operations, compared to 122 threat calls TQA received during the 2010 Census (Internal Documents, 2020). Although only 20 percent of calls to CQA were received between August and October, CQA received more than 86 percent of all threat calls over the same period. Figure 26 shows when threat calls were received compared to the total inbound call volume from March through October 2020.

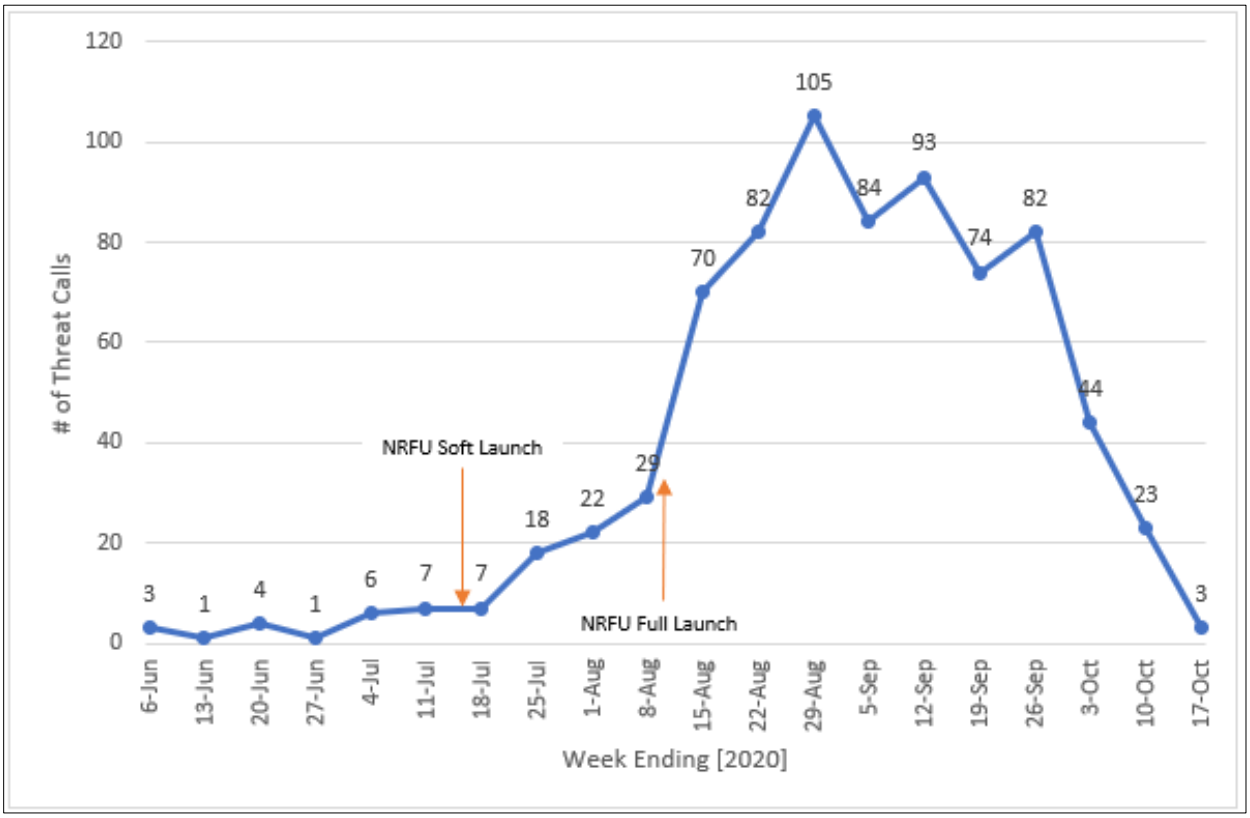
*Figure 26. Inbound: Threat Calls Received and Total Inbound Call Volume*




Source: U.S. Census Bureau, 2020 Census, "CQA Threat Calls – Volume and Trending."

The increase in threat calls was directly attributed to the launch of the NRFU operation. The Notices of Visit (NOVs) that NRFU enumerators left at nonresponding households included the CQA phone number, rather than the enumerator's phone number, as was done in 2010. The digital nature of the 2020 NRFU operation meant that a new enumerator could be assigned to a housing unit each day, so a centralized phone number was necessary. Printing the CQA phone number on the NOVs drove all NRFU-related call volume, and ultimately, threat calls. Figure 27 below shows the weekly increase in threat calls from the time of NRFU's soft launch in mid-July 2020.

*Figure 27. Inbound: Threat Calls Received Weekly during NRFU*




Source: U.S. Census Bureau, 2020 Census, "CQA Threat Calls – Volume and Trending."

### 5.1.4 *Inbound Call Reasons and Requests*

18. What were the reasons people called CQA?

After a respondent connected with a CSR, the CSR asked how they could assist the caller. Depending on the caller's response, the CSR recorded a call reason within the Agent Desktop that reflected the purpose of the call. According to the call reason selections made by CSRs, respondents called for the following reasons:

- 48 percent of respondents called needing help completing their census questionnaire (enumeration).
- 45 percent of respondents called needing general assistance, such as having a question about mailing materials they received, or to check whether the Census Bureau received their response.
- Less than 1 percent of callers experienced a technical issue completing their questionnaire while using the internet self-response system.
- 2 percent of calls were not assigned a call reason by the CSR.
- Nearly 5 percent of calls were given a call reason of "other," meaning they did not fit into any of the listed call reasons. Some reasons for selecting other may include a

language barrier, or the CSR not receiving a response from the caller. See Table 22 for a complete breakdown of call reasons selected by CSRs.

*Table 22. Inbound: CSR-Handled Calls by Call Reason*

| Call Reason | # of CSR Handled Calls | % of CSR Handled Calls |
|---|---|---|
| **Total** | **4,717,003** | **100.0%** |
| Enumerate | 2,271,123 | 48.1% |
| General Assistance | 2,107,860 | 44.7% |
| Other (No Response from Caller / Language Barrier / Robocall) | 222,061 | 4.7% |
| None Selected | 84,801 | 1.8% |
| Respondent Technical Issue | 31,158 | 0.7% |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "AHT and Call Volume by Day and Hour."

Call reasons selected are meant to inform the reasons why respondents initially contacted CQA, but do not necessarily indicate the outcome of the call.

19. Which FAQs were accessed by callers most in the IVR?

Individual FAQs were accessed 739,226 times within the IVR. It should be noted that from March 9 through March 27, 2020, the CQA operations team were able to invoke the hard path of the IVR, which forced callers to listen to one FAQ before asking to speak to a CSR. Because of the hard path, it is not possible to differentiate between callers interested in hearing the FAQs and those who merely listened to one to satisfy the requirement of the hard path to speak to a CSR.

The most popular FAQ menu option was for those needing help with the questionnaire. Nearly 48 percent of all FAQs accessed in the IVR were from this menu. Those callers with questions about mailings made up 32 percent of FAQs accessed, and the general help menu was accessed more than 18 percent of the time. FAQs about the Census Bureau's authority to collect census data and confidentiality were accessed 2 percent of the time.

Despite IVR broadcast messages informing callers of when paper questionnaires would be mailed to households, that question was the most frequently accessed FAQ within the IVR. Table 23 shows the frequency with which each FAQ was accessed within the IVR.

*Table 23. Inbound: ACD/IVR - Most Frequently Accessed FAQs*

| FAQ Menu | FAQ Topic | % of All FAQs |
|---|---|---|
| | | |
| **Questionnaire** | How do I answer the race question? | 13.6 |
| | Who should be counted in the 2020 Census? | 10.6 |
| | Who should complete the 2020 Census questionnaire? | 10.3 |
| | Address is vacant / nonresidential | 9.7 |
| | I am moving or have moved; how do I respond? | 3.4 |
| | **Total** | **47.6** |
| **Mail** | When will paper questionnaires be mailed? | 21.8 |
| | I already responded; why am I still receiving mail? | 3.8 |
| | Why do you send so many reminders? | 3.1 |
| | I lost my return envelope; how do I return my completed questionnaire? | 1.6 |
| | How do I correct a mistake? | 1.5 |
| | **Total** | **31.8** |
| **General Help** | General information about the 2020 Census | 11.0 |
| | Am I required to respond? | 3.4 |
| | Where can I find my Census ID? | 1.7 |
| | Why am I receiving calls or visits? | 1.4 |
| | Is there a fine if I don't respond? | 0.9 |
| | **Total** | **18.4** |
| **Authority & Confidentiality** | Census Bureau's authority to collect information | 1.2 |
| | Is responding online safe? | 0.5 |
| | Are my responses confidential? | 0.4 |
| | **Total** | **2.1** |

Source: U.S. Census Bureau, 2020 Census, Excel Spreadsheet, "IVR Pathing and Deflection."

20. Which FAQs were accessed and linked[21] most frequently by CSRs throughout operations?

To help CSRs answer questions from callers, there was an FAQ database built into the Agent Desktop. When respondents asked CSRs questions, CSRs would use keywords to search for scripted responses from a database with more than 460 FAQs. Each time CSRs recited an FAQ to a respondent, they were trained to select a "link" button within the FAQ so that its usage would be recorded. The frequency of each FAQ linkage provides more insight as to the types of questions respondents had regarding the 2020 Census.

The most popular FAQ linked by CSRs was "How do I get a paper questionnaire?" with 367,405 occurrences. The second most frequently linked FAQ was "Can I complete the 2020 Census over

[21]For an FAQ or Job Aid to register as having been used during a call, CSRs must select a button within the Agent Desktop that will link the FAQ or Job Aid to the call details.

the phone?" however, the CQA operations team told CSRs to link this FAQ whenever completing an enumeration. Other reasons people contacted CQA was to ask why someone was contacting them when they've already completed the 2020 Census, and how to respond when a survey invitation was received at a second residence. Callers also wanted to know whether their responses were received. See Table 24 for a list of the top ten FAQs linked by CSRs for inbound calls.

*Table 24. Inbound: Top 10 CSR-Linked FAQs - Total*

| Rank | FAQ Text | Total # of Links |
|---|---|---|
| 1 | How do I get a paper questionnaire? | 367,405 |
| 2 | Can I complete the 2020 Census over the phone? | 245,868 |
| 3 | I completed the 2020 Census. Why is someone contacting me? | 110,909 |
| 4 | Do I need to keep this mail? | 100,167 |
| 5 | I have more than one home; how do I respond? | 94,207 |
| 6 | How do I respond to the Census? | 82,482 |
| 7 | I received a paper questionnaire, but I already responded. | 77,422 |
| 8 | ONLINE – Have you received my response? | 74,742 |
| 9 | Why am I still receiving mail? | 70,232 |
| 10 | I am moving or have moved; how do I respond? | 61,936 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Knowledge Articles Interactive."

It should be emphasized that FAQ links are dependent on CSRs reading the relevant FAQs and remembering to click the link button each time an FAQ is read. Further, the FAQ library contained more than 450 FAQs, many of which can be used interchangeably. For example, in addition to the "How do I get a paper questionnaire?" FAQ, another one frequently used by CSRs was "Can you mail a questionnaire to me?" It is possible that CSRs read both FAQs to respondents on a single call or had a preference to use one FAQ over the other.

Just as the 2020 Census mailing and outreach strategy drove call volume to CQA, it also influenced the types of questions callers had about the 2020 Census:

- Periods 1, 2, and 3 (Mailings 1, 2, and 3)
    - Callers generally wanted to know how they could get a paper questionnaire. Three of the five most asked FAQs addressed when questionnaires would be sent out and how they could respond. Callers also asked how to complete the census if they had more than one home, and how to correct a mistake if they submitted their questionnaire online. During the period of the first mailing, callers also needed help with how to answer the race question on their census form.
- Period 4 (Mailing 4)
    - Paper questionnaires arrived in households sometime between April 8 and the end of April. Overall call volume decreased throughout the month of April,

however, the number one reason people called CQA during that time was to ask how they could receive a paper questionnaire.

- Period 5 (Mailing 5)
    - There was relatively low call volume during Period 5, and callers still wanted to know how to receive a paper questionnaire. In an effort to reduce the workload of the upcoming NRFU operation, CQA proactively offered to enumerate those callers who had not yet responded to the census, which moved "Can I complete the 2020 Census over the phone?" to the top of the list during this period. Callers also wanted to know why they received a paper questionnaire when they had already responded, and more generally, wanted to know why they continued to receive mailings.
- Period 6 (Mailing 6 and NRFU)
    - The calls that came into CQA from mid-July through the end of operations was driven largely by the NRFU field activities. Callers asked why they were being visited by a field enumerator when they had already responded or had questions about the NOV that was left at their residence. Respondents also wanted to know whether the Census Bureau had received their responses, how to respond if they had moved during the period of census data collection, and finally, if they can be enumerated over the phone.

See Table 25 for the top five FAQs linked by CSRs during each respondent outreach period.

*Table 25. Inbound: Top 5 FAQs by Respondent Outreach Period*

| | Ranking (1 through 5) | | | | | |
|---|---|---|---|---|---|---|
| **FAQ Topic** | Period 1 (3/9-3/20) | Period 2 (3/16 – 3/25) | Period 3 (3/26 – 4/7) | Period 4 (4/8 – 4/30) | Period 5 (4/27 – 7/21) | Period 6 (7/16 – 10/15) |
| How do I get a paper questionnaire? | 1 | 1 | 1 | 1 | 2 | |
| Can I complete the 2020 Census over the phone? | 2 | 2 | 2 | 2 | 1 | 4 |
| How do I respond to the Census? | 3 | 3 | 3 | | | |
| I have more than one home; how do I respond? | 4 | 4 | | | 5 | |
| How do I answer the race question? | 5 | | | 4 | | |
| Can you mail a questionnaire to me? | | 5 | 4 | 3 | | |
| ONLINE – How do I correct a mistake? | | | 5 | 5 | | |
| I received a paper questionnaire, but I already responded. | | | | | 3 | |
| Why am I still receiving mail? | | | | | 4 | |
| I completed the 2020 Census. Why is someone contacting me? | | | | | | 1 |
| Someone left a Notice of Visit at my door, what do I do? | | | | | | 2 |
| ONLINE – Have you received my response? | | | | | | 3 |
| I am moving or have moved; how do I respond? | | | | | | 5 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Knowledge Articles Interactive."

## 21. Which job aids were accessed and linked most frequently by CSRs?

When certain questions were more complex or CSRs were asked to troubleshoot, they referred to job aids within the Agent Desktop. The most frequently used job aid linked by CSRs was assisting callers who had difficulty using their Census IDs to access the ISR when responding online. Respondents also called about having received two identical 2020 Census mailers with slight differences in the address (e.g., 123 Main St and 123 Maine St). During the NRFU period, the most frequently linked job aid was about how to make a complaint against an enumerator. Other popular job aids helped troubleshoot callers with technical issues related to the ISR website, as well as how to submit a request for an additional FAQ that did not previously exist. Table 26 shows the frequency in which the top job aids were linked.

*Table 26. Inbound: Top 5 CSR-Linked Job Aids*

| Rank | FAQ Text | Total # of Links |
|---|---|---|
| 1 | Why doesn't my Census ID work? | 47,834 |
| 2 | Household received two identical 2020 Census mailers | 33,444 |
| 3 | Complaint against a Census Bureau Interviewer | 22,671 |
| 4 | Technical Issues – my2020census.gov website | 13,871 |
| 5 | FAQ Feedback – Request New FAQ | 8,361 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Knowledge Articles Interactive."

22. How often were requests made to CSRs for paper questionnaires?

There were five FAQs that addressed when paper questionnaires would be sent to households, and CSRs linked to them 507,789 times. Since the FAQs addressed the same underlying question, CSRs often had a preference in which one they used. It is possible that the total links does not equal the true number of requests for paper questionnaires, as CSRs may have read and linked more than one of the FAQs on the same call. See Table 27 for the wording of the five FAQs relating to paper questionnaires.

*Table 27. Inbound: Caller Request – Paper Questionnaire*

| FAQ Asked | # of CSR Handled Calls |
|---|---|
| **Total** | **507,789** |
| How do I get a paper questionnaire? | 367,405 |
| How do I respond to the Census? | 82,482 |
| Can you mail a questionnaire to me? | 55,049 |
| Can you send me a non-English questionnaire? | 2,621 |
| How do I get a paper questionnaire? (Puerto Rico only) | 232 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Knowledge Articles Report."

23. How often were requests made to CSRs to check whether a respondent's completed census questionnaire was received?

CSRs linked FAQs relating to questionnaire status 127,713 times. CSRs used one of three FAQs depending on how the caller responded (online, paper, or phone).

*Table 28. Inbound: Caller Request- Questionnaire Status*

| FAQ Asked | # of CSR Handled Calls |
|---|---|
| **Total** | **127,713** |
| Have you received my online response? | 74,742 |
| Have you received my paper response? | 40,355 |
| Have you received my phone response? | 12,616 |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Knowledge Articles Report."

The number of respondents calling CQA for confirmation that the Census Bureau received their response is likely much higher than the number of links made by CSRs. During various time periods, the IVR informed callers that CSRs could not tell them whether their responses were received.

## 5.2 Outbound Call Metrics

24. What was the difference in the planned number of CI cases received versus the actual number of CI cases received?
    a. Total, by language.
    b. Prior to the first day of outbound operations.

The first Outbound CI workload was selected according to plan on March 12, 2020. The workload included 653 cases. After applying predetermined validations to the workload, CQA successfully ingested 647 cases. The Census Enumeration Branch in the Decennial Statistical Studies Division (DSSD) was responsible for selecting cases daily. Because of unforeseen technical issues outside of CQA control, workloads were sent intermittently throughout operations.

The Outbound CI operation was scheduled to begin on April 2, 2020. The original plan was that only cases in Buckets[22] 1 through 8 were eligible to be dialed. After reducing call center capacity to 50 percent on March 22, 2020, in response to CDC guidelines, the Census Bureau decided to delay the start of the Outbound CI operation by three weeks. The delay allowed additional time to focus on the success of the Inbound operation. The Outbound CI operation officially began on April 22, 2020. The Census Bureau approved only cases in Bucket 4 to be dialed. The number of cases that would have been eligible to be dialed on April 22, 2020, based on the original plan, was 2,111,195. The actual number of cases eligible to dial on April 22 was 341,166, a negative difference of 83.8 percent.

*Table 29. Outbound: Planned vs. Actual Cases Received, by Language – Buckets 1 through 8*

| Case Language | Planned | Actual | Difference |
|---|---|---|---|
| **Total** | **3,228,761** | **3,143,034** | **-2.7%** |
| English | 2,947,798 | 3,018,669 | 2.4% |
| Spanish | 280,963 | 124,365 | -55.7% |

Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Coverage Improvement: Cases Received by Language – PTD."

As seen in Table 29, the original planned number of CI cases was 3,228,761. This model was provided to CQA in November 2019 and included a breakdown by language and day. The

[22] Bucket – A variable assigned to each CI Case that explains the reason why it was selected.

intention was to send all cases in all buckets, and CQA would be responsible for holding the buckets until the Census Bureau approved cases in each bucket to be released. Because the original plan was to dial only Buckets 1 through 8, an estimate for the remaining buckets was not available to CQA prior to the operation. By the end of operations, CQA received 8,743,662 CI cases, of which 8,505,548 were English and 238,114 were Spanish. As seen in Table 29, 3,143,034 cases received were in Buckets 1-8, a negative difference of 2.7 percent compared to the original plan for these buckets.

In total, there were seven replans of cases received provided from the Census Bureau to CQA. The dates and the buckets included in the replans are summarized in Table 30 below.

*Table 30. Outbound: Planned Cases Received*

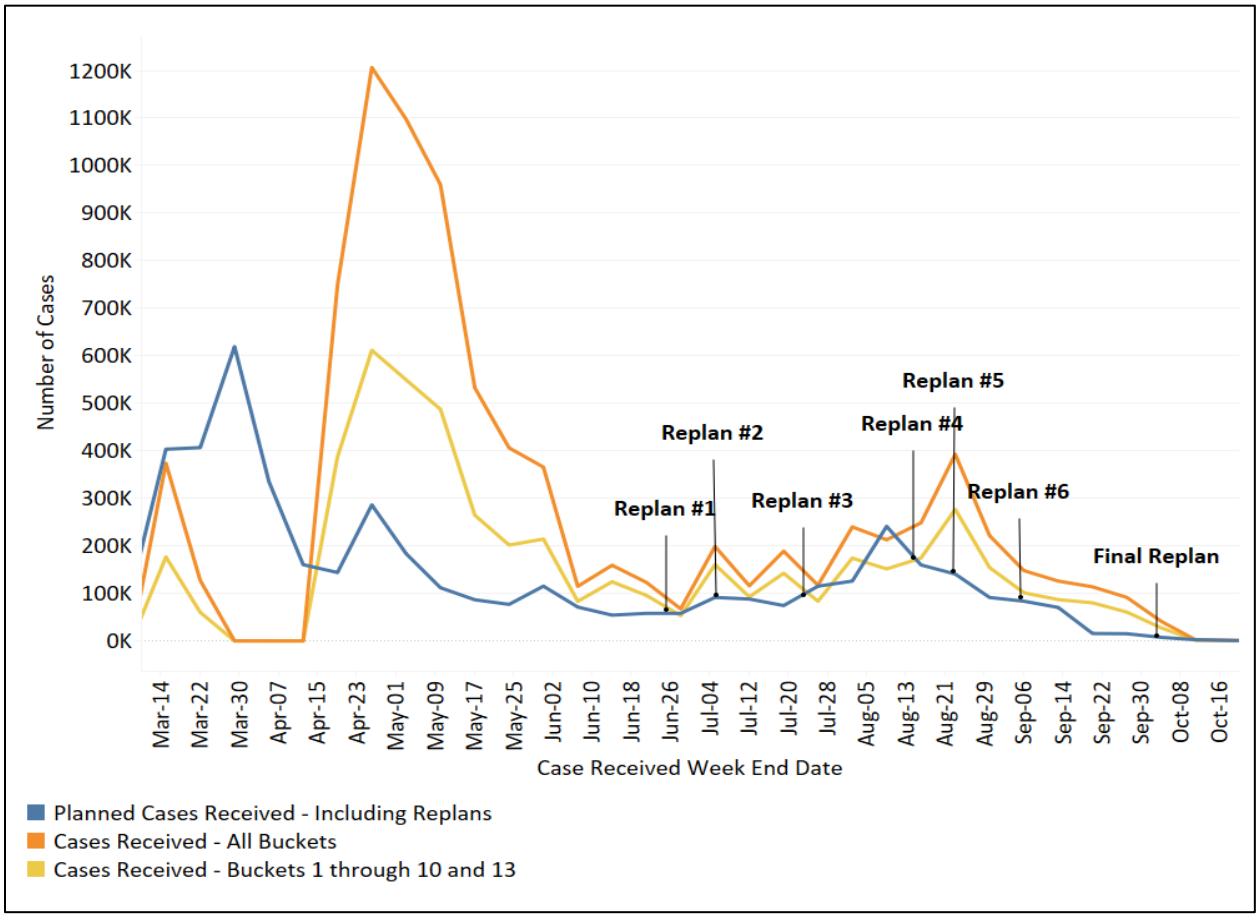
| Plan Number | Received Plan Date | Buckets | Dates of Plan |
|---|---|---|---|
| **Original Plan** | **November, 2019** | **1-8** | **March 12 to July 11, 2020** |
| Replan #1 | June 25, 2020 | 1-8, 10 | June 28 to October 25, 2020 |
| Replan #2 | July 6, 2020 | 1-8, 10 | July 12 to October 25, 2020 |
| Replan #3 | July 27, 2020 | 1-10, 13 | July 26 to October 25, 2020 |
| Replan #4 | August 11, 2020 | 1-10, 13 | August 16 to September 27, 2020 |
| Replan #5 | August 23, 2020 | 1-10, 13 | August 23 to September 27, 2020 |
| Replan #6 | September 6, 2020 | 1-10, 13 | September 6 to September 27, 2020 |
| Final Replan | October 4, 2020 | 1-10, 13 | October 4 to October 18, 2020 |

Source: U.S. Census Bureau, 2020 Census, Email Record between Census Enumeration Branch and CQA.

Only cases in Bucket 4 were dialed from April 22 to June 10, 2020. All cases in Buckets 1 through 8 were released on June 11, 2020. On June 20, 2020, cases in Bucket 10 were also released. Cases in Bucket 10 were included in the first replan, delivered to CQA on June 25, 2020, as seen in Table 30 above. While Buckets 9 and 13 were approved to be released, CQA did not dial any of these cases. Cases in Buckets 9 and 11 through 17 were never dialed.

The last workload was sent on October 12, 2020. From this workload, CQA ingested 1,207 CI cases and dialed all of them for the first and last time on October 14, 2020. All cases in Buckets 1 through 8 and 10 had at least one attempt before the operation ended. The planned versus actual cases received are summarized in Figure 28 below.

*Figure 28. Outbound: Planned vs. Actual Cases Received*




Source: U.S. Census Bureau, 2020 Census, Email Record between Census Enumeration Branch and CQA.

25. How many dial attempts were made?
    a. Total.
    b. By hour of the day.
    c. By day of the week.
    d. By week of data collection.

*Figure 29. Outbound: Dial Attempts by Hour and Day of Week*

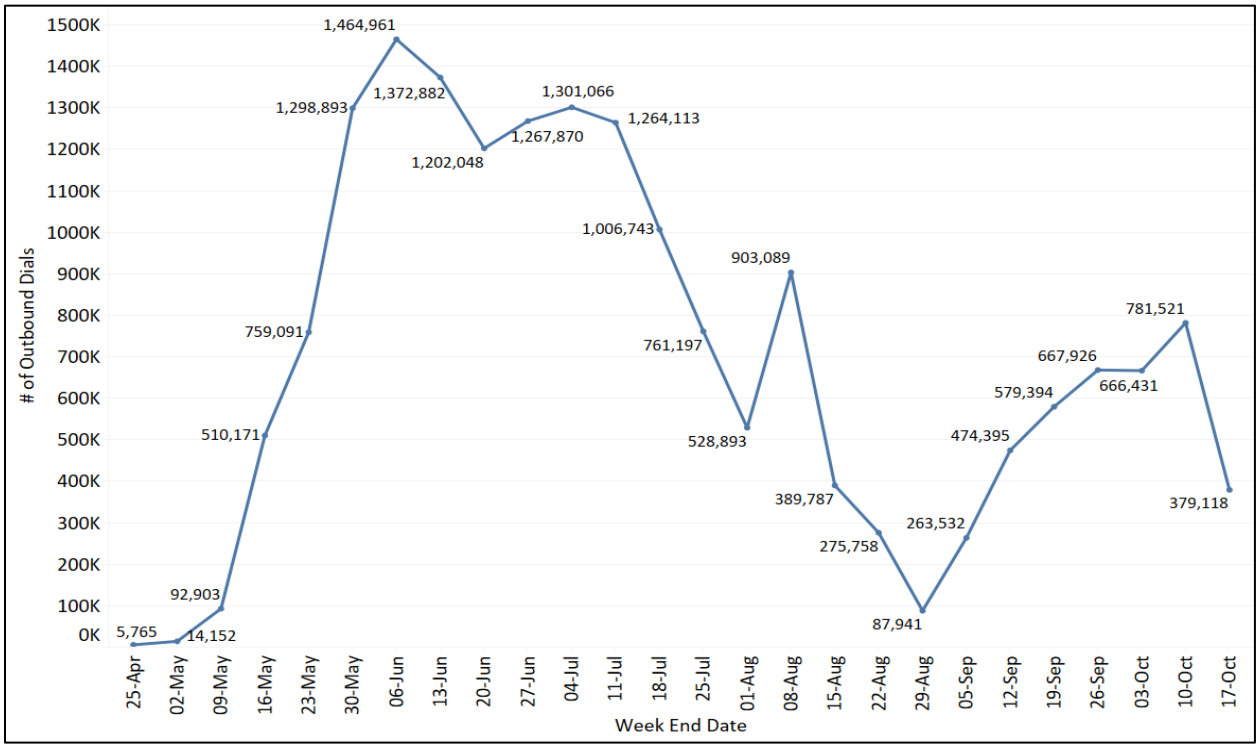
| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | **Total** |
|---|---|---|---|---|---|---|---|---|
| 5 a.m. | 0 | 9 | 0 | 0 | 0 | 0 | 0 | **9** |
| 6 a.m. | 0 | 110,511 | 138,730 | 143,550 | 152,263 | 146,570 | 0 | **691,624** |
| 7 a.m. | 0 | 150,813 | 182,964 | 195,485 | 199,284 | 222,671 | 120,817 | **1,072,034** |
| 8 a.m. | 0 | 182,324 | 231,460 | 240,066 | 230,112 | 270,797 | 153,352 | **1,308,111** |
| 9 a.m. | 33,208 | 195,150 | 234,128 | 236,375 | 235,342 | 305,169 | 150,774 | **1,390,146** |
| 10 a.m. | 46,778 | 199,331 | 247,956 | 242,085 | 238,148 | 303,125 | 153,769 | **1,431,192** |
| 11 a.m. | 48,921 | 225,776 | 265,510 | 262,055 | 252,107 | 322,989 | 144,477 | **1,521,835** |
| 12 p.m. | 50,766 | 221,683 | 279,397 | 279,038 | 249,744 | 337,174 | 141,270 | **1,559,072** |
| 1 p.m. | 53,040 | 242,784 | 295,247 | 295,616 | 261,069 | 327,586 | 148,321 | **1,623,663** |
| 2 p.m. | 50,029 | 230,168 | 270,833 | 269,414 | 230,540 | 303,146 | 140,077 | **1,494,207** |
| 3 p.m. | 52,129 | 229,696 | 262,288 | 257,011 | 219,222 | 284,592 | 107,297 | **1,412,235** |
| 4 p.m. | 50,852 | 216,139 | 234,351 | 220,921 | 193,712 | 238,040 | 88,468 | **1,242,483** |
| 5 p.m. | 50,102 | 204,501 | 221,197 | 207,223 | 190,393 | 222,031 | 72,508 | **1,167,955** |
| 6 p.m. | 44,410 | 169,642 | 180,489 | 168,033 | 158,854 | 171,439 | 63,362 | **956,229** |
| 7 p.m. | 30,052 | 122,840 | 127,984 | 116,562 | 113,797 | 117,986 | 50,235 | **679,456** |
| 8 p.m. | 24,094 | 75,417 | 84,461 | 79,543 | 71,682 | 77,713 | 41,968 | **454,878** |
| 9 p.m. | 18,765 | 50,621 | 55,170 | 55,500 | 51,574 | 54,293 | 28,406 | **314,329** |
| 10 p.m. | 0 | 22 | 6 | 26 | 64 | 11 | 0 | **129** |
| 11 p.m. | 0 | 0 | 33 | 0 | 0 | 20 | 0 | **53** |
| **Total** | **553,146** | **2,827,427** | **3,312,204** | **3,268,503** | **3,047,907** | **3,705,352** | **1,605,101** | **18,319,640** |

Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Outbound Calls KPIs by Hour EOP."
The Hour of Day is in Mountain Time Zone (MT). Hour 12 a.m. includes all calls that were dialed from midnight to 12:59 a.m. MT. Hour 1 a.m. includes all cases dialed from 1:00 a.m. MT to 1:59 a.m. MT, etc.

From April 22, 2020, through the last day of the CI Outbound operation on October 15, 2020, there were 18,319,640 outbound dial attempts.

Outbound dials were placed between the hours of 8 a.m. and 9 p.m. local time of the case. As seen in Figure 29, the highest volume day of week was Friday with 3,705,352 outbound dials. The highest volume hour of day was 1 p.m. with 1,623,663 outbound dials. The least number of outbound dials were made on Sundays, accounting for only 3 percent of all outbound dials.

*Figure 30. Outbound: Dial Attempts by Week of Operation*

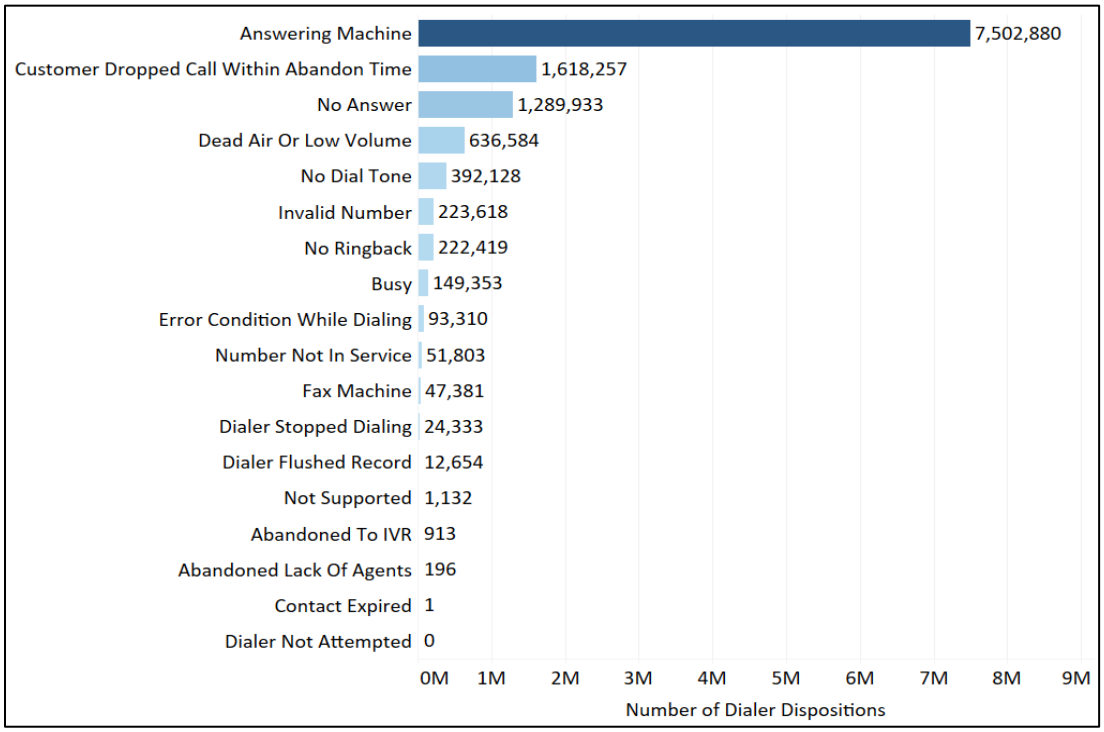



Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Outbound Calls KPIs by Hour EOP."
The CQA Operational Week is from Sunday to Saturday; all dates refer to the weekend date.

The CI Outbound operation started on April 22, 2020, and lasted 26 weeks. As seen in Figure 30, outbound dials peaked at 1,464,961 attempts during Week 7 (May 31 – June 6, 2020). There was a significant drop in the number of cases dialed in the month of August that correlated with a spike in Inbound Call Volume, because of the start of the NRFU operation.

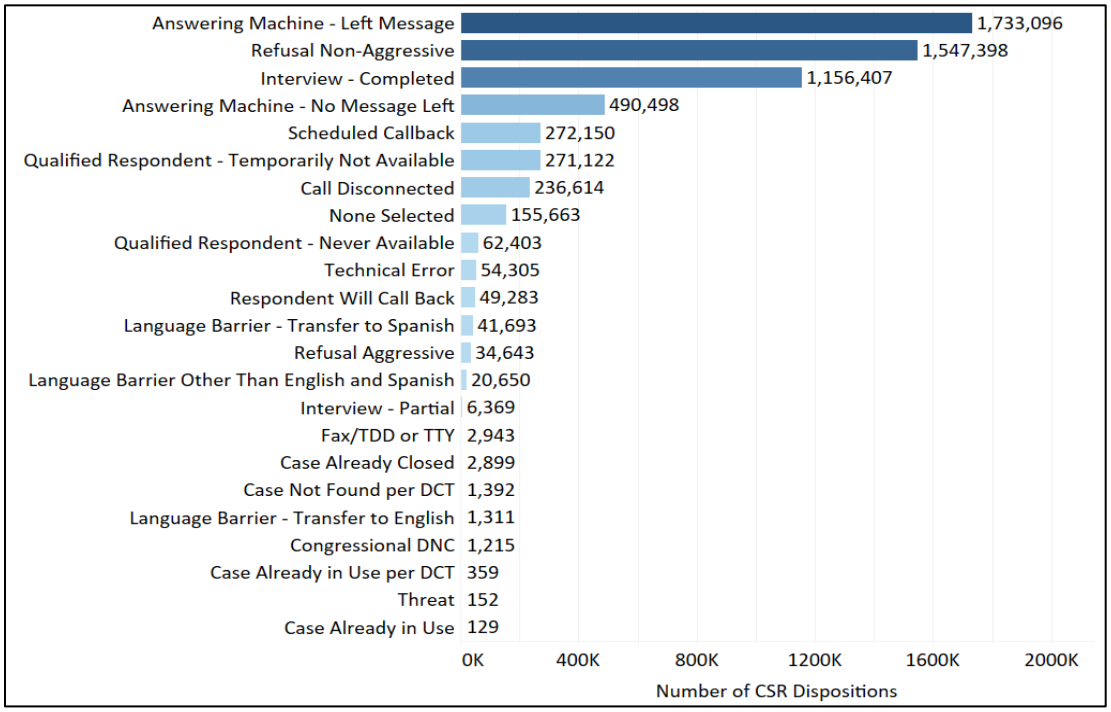
26. What was the outcome of the dial attempts?

*Figure 31. Outbound: Dialer Dispositions*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Outbound Dispositions."

*Figure 32. Outbound: CSR Dispositions*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Outbound Dispositions."

There are two primary categories of call dispositions: dialer dispositions and CSR dispositions. A dialer disposition is the disposition automatically captured by the dialer when the call is not routed to a CSR. A CSR disposition is the disposition manually captured by the CSR after handling the call. For either category, the call disposition determined the dialing treatment that was applied for the next attempt at the case.

In total, the dialer made 18,319,640 automated attempts at reaching a respondent. A CSR was connected 6,142,694 times. The remaining 12,176,946 calls were not connected to a CSR, and instead, received a dialer disposition. As seen in Figure 31, “answering machine” was the most common dialer disposition.

The total number of dialer dispositions in Figure 31 is 12,266,895. The actual number of dialer-only dispositions, as indicated above, was 12,176,946, a difference of 89,949 calls. While the majority of dispositions were either a dialer disposition or a CSR disposition, there were 89,949 dial attempts that were counted erroneously as both a dialer disposition and a CSR disposition, when they should have only received a CSR disposition. These overlaps, accounting for less than 0.5 percent of all dials, were because of a technical routing error that went unnoticed during operations. In these rare instances, the dialer recognized that the call was not connected to a respondent, assigned it a dialer disposition, and incorrectly forwarded the call to a CSR resulting in the call being handled. Figure 31 (dialer dispositions) includes the 89,949 attempts.

27. How many respondent callbacks were there?
    a. Total.
    b. By hour of the day.
    c. By day of the week.
    d. By week of data collection.

*Figure 33. Outbound: Respondent Callbacks by Hour and Day of Week*

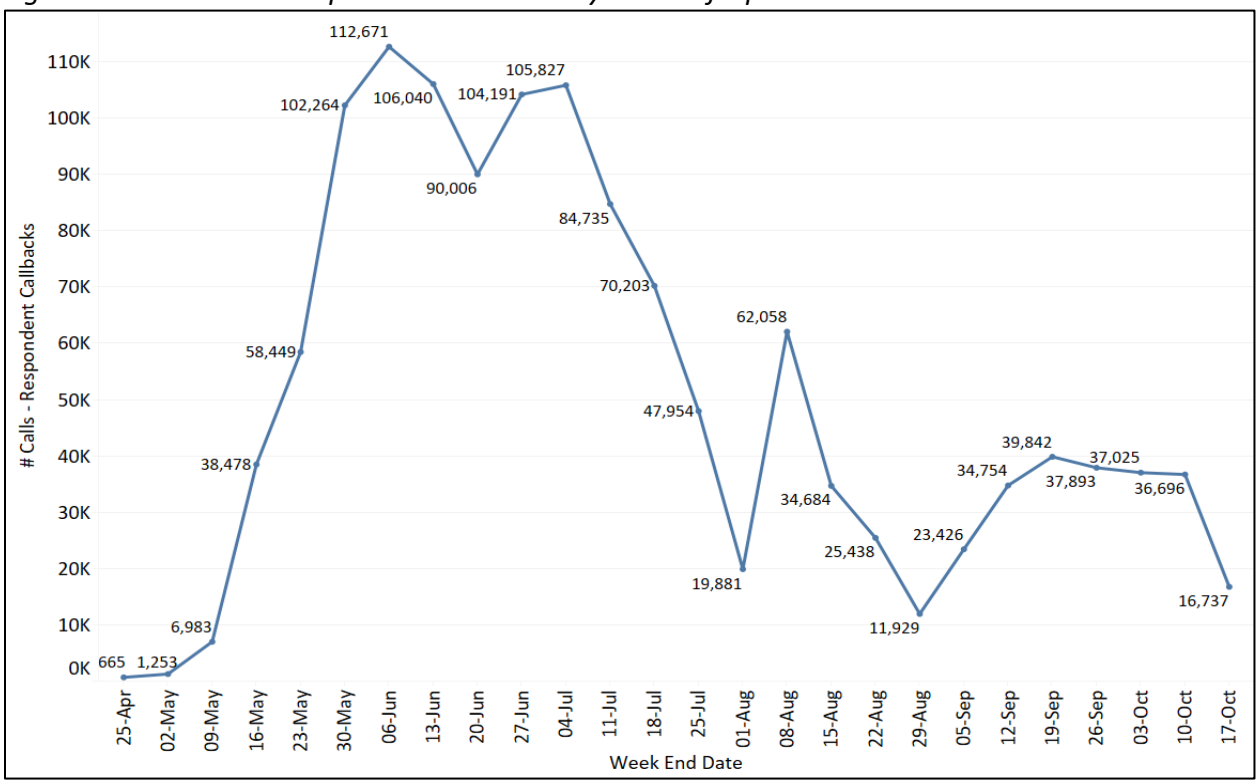
| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | **Total** |
|---|---|---|---|---|---|---|---|---|
| 12 a.m. | 158 | 103 | 202 | 218 | 206 | 218 | 266 | **1,371** |
| 1 a.m. | 120 | 81 | 123 | 145 | 117 | 112 | 149 | **847** |
| 2 a.m. | 101 | 60 | 100 | 141 | 101 | 104 | 133 | **740** |
| 3 a.m. | 82 | 60 | 142 | 170 | 181 | 131 | 114 | **880** |
| 4 a.m. | 136 | 183 | 248 | 317 | 252 | 301 | 215 | **1,652** |
| 5 a.m. | 401 | 807 | 1,157 | 1,234 | 1,150 | 1,101 | 732 | **6,582** |
| 6 a.m. | 729 | 5,035 | 6,044 | 6,243 | 6,602 | 6,371 | 1,344 | **32,368** |
| 7 a.m. | 1,270 | 9,687 | 11,130 | 11,045 | 11,788 | 12,863 | 4,869 | **62,652** |
| 8 a.m. | 1,544 | 13,623 | 15,796 | 15,081 | 16,548 | 18,206 | 7,935 | **88,733** |
| 9 a.m. | 2,757 | 16,499 | 18,131 | 17,236 | 18,250 | 20,132 | 9,288 | **102,293** |
| 10 a.m. | 3,529 | 17,415 | 20,110 | 19,063 | 19,685 | 20,423 | 9,356 | **109,581** |
| 11 a.m. | 3,888 | 19,154 | 21,232 | 19,506 | 20,011 | 20,924 | 9,587 | **114,302** |
| 12 p.m. | 4,120 | 19,260 | 21,433 | 19,930 | 19,253 | 21,535 | 8,989 | **114,520** |
| 1 p.m. | 4,160 | 20,448 | 22,028 | 20,342 | 19,952 | 21,415 | 8,648 | **116,993** |
| 2 p.m. | 4,186 | 19,684 | 21,097 | 19,578 | 18,354 | 20,314 | 8,217 | **111,430** |
| 3 p.m. | 3,830 | 18,545 | 19,649 | 19,046 | 16,878 | 18,211 | 7,104 | **103,263** |
| 4 p.m. | 3,774 | 16,492 | 16,952 | 16,192 | 14,705 | 14,894 | 6,054 | **89,063** |
| 5 p.m. | 3,733 | 14,541 | 15,114 | 14,191 | 13,123 | 12,648 | 5,393 | **78,743** |
| 6 p.m. | 3,482 | 12,130 | 12,758 | 11,761 | 10,617 | 10,251 | 4,469 | **65,468** |
| 7 p.m. | 2,719 | 8,791 | 9,021 | 8,627 | 8,035 | 7,769 | 3,564 | **48,526** |
| 8 p.m. | 2,049 | 5,864 | 6,446 | 5,731 | 5,182 | 5,562 | 2,806 | **33,640** |
| 9 p.m. | 1,570 | 3,915 | 4,447 | 4,142 | 3,486 | 3,728 | 2,027 | **23,315** |
| 10 p.m. | 438 | 958 | 1,085 | 959 | 841 | 1,014 | 651 | **5,946** |
| 11 p.m. | 215 | 404 | 411 | 455 | 394 | 497 | 288 | **2,664** |
| **Total** | **48,991** | **223,739** | **244,856** | **231,353** | **225,711** | **238,724** | **102,198** | **1,315,572** |

Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Respondent Callbacks by Day and Hour EOP."
The Hour of Day is in Mountain Time Zone (MT). Hour 12 a.m. includes all calls that entered queue from midnight to 12:59 a.m. MT. Hour 1 a.m. includes all calls that entered queue from 1:00 a.m. MT to 1:59 a.m. MT, etc.

As seen in Figure 32, there were 1,315,572 respondent callbacks during the CI Outbound operation.

Respondent callbacks were handled between the hours of 5 a.m. and 10 p.m. MT. The majority of calls, as seen in Figure 33, were made Monday through Friday between 9:00 a.m. and 3:59 p.m. MT. The highest volume day of week was Tuesday with 244,856 respondent callbacks. The highest volume hour of day was 1 p.m. with 116,993 respondent callbacks. The least number of calls were received on Sundays, accounting for less than 4 percent of all respondent callbacks. There were 14,100 respondent callbacks received during closed business hours.

*Figure 34. Outbound: Respondent Callbacks by Week of Operation*




Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Respondent Callbacks by Day and Hour EOP."
The CQA Operational Week is from Sunday to Saturday; all dates refer to the week end date.

As seen in Figure 34, respondent callbacks peaked at 112,960 calls during Week 7 (May 31 – June 6, 2020).

28. What was the outcome of the respondent callbacks?

*Table 31. Outbound: Respondent Callbacks*

| | |
|---|---|
| **Total Respondent Callbacks** | 1,315,572 |
| **Abandoned Calls** | 394 |
| **Short Abandons** | 464,769 |
| **Service Level – 30 Seconds** | 99.9% |
| **CSR Handled Calls** | 850,409 |
| **With Census ID** | 663,005 (78.0%) |
| **Without Census ID** | 187,404 (22.0%) |
| **Closed Completed** | 539,117 (63.4%) |

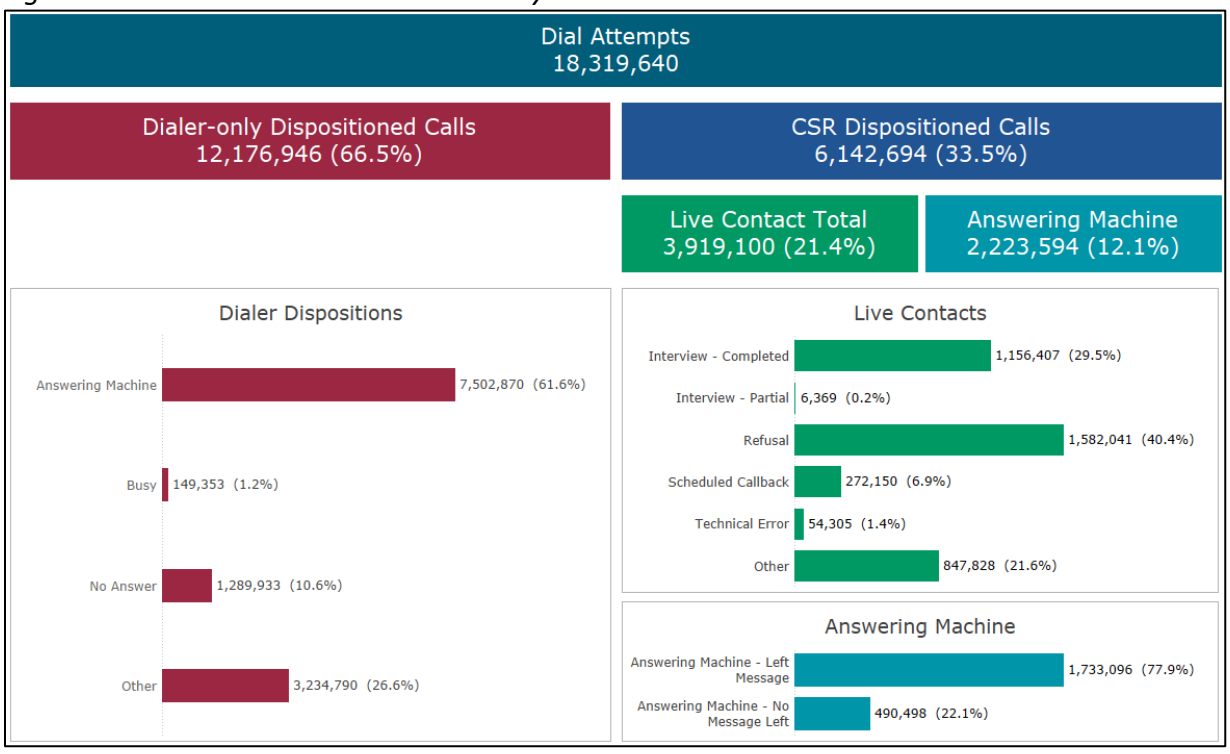
Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Respondent Callbacks by Day and Hour EOP."

As seen in Table 31, there were 1,315,572 respondent callbacks during the Outbound CI operation. Of those, 99.9 percent were answered within 30 seconds. Less than 0.02 percent of respondent callbacks were abandoned before being handled. More than a third of respondent callbacks were identified as short abandons. Short abandons occurred when a respondent called the respondent callback line and hung up immediately.

Respondent callbacks were extremely successful. Of the 850,409 handled respondent callbacks, 63.4 percent resulted in the case being closed completed with either a Partial or Complete Interview. Respondent callbacks accounted for 31.8 percent of all closed complete cases.

29. How many dial attempts resulted in an answering machine?
    a. By the dialer.
    b. By the CSR.

*Figure 35. Outbound: Dialer Call Summary*




Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Deck, "Coverage Improvement: Dialer Call Summary - PTD."

Out of the 18,319,640 Outbound dial attempts, 9,726,464, or 53.1 percent, resulted in an answering machine.

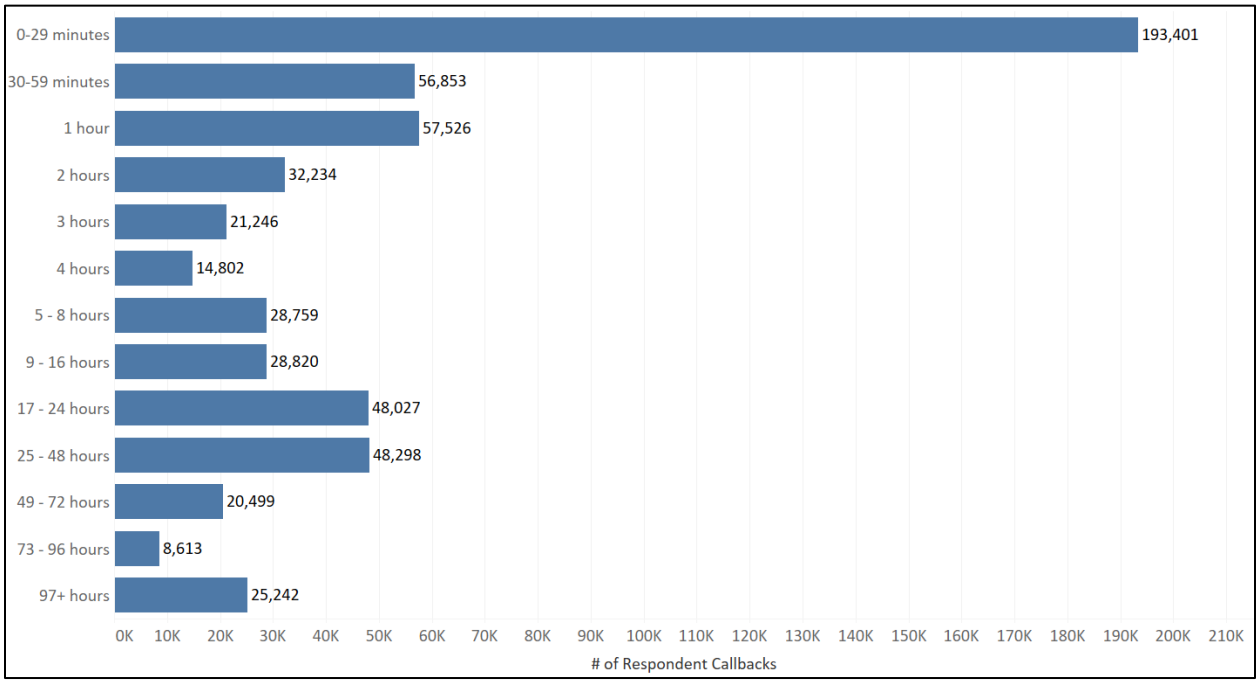
When the dialer recognized a voicemail, it left an automated voice message and prevented the call from being routed to a CSR. Of the 12,176,946 dialer-only dispositioned calls, 7,502,870, or 61.6 percent, were dispositioned as an answering machine. The remaining 38.4 percent of dialer-only dispositioned calls included outcomes such as "Busy" and "No Answer." The full breakdown of dispositions can be seen in Figure 31, in Question 26 above.

The 7,502,870 dialer-only dispositioned answering machines accounted for 77.1 percent of all answering machine dispositions. The remaining 22.9 percent of all answering machines were dispositioned by CSRs.

Out of the 6,142,694 CSR handled calls, excluding respondent callbacks, the CSR dispositioned 2,223,594, or 36.2 percent of all CSR handled calls, as an answering machine. Upon reaching an answering machine, the CSR was able to leave a voicemail 77.9 percent of the time. As mentioned above, the 2,223,594 CSR dispositioned answering machines account for 22.9 percent of all answering machine dispositions.

30. What was the average length of time between a voicemail left and respondent callback?

*Figure 36. Outbound: Length of time between Voicemail and Respondent Callback*

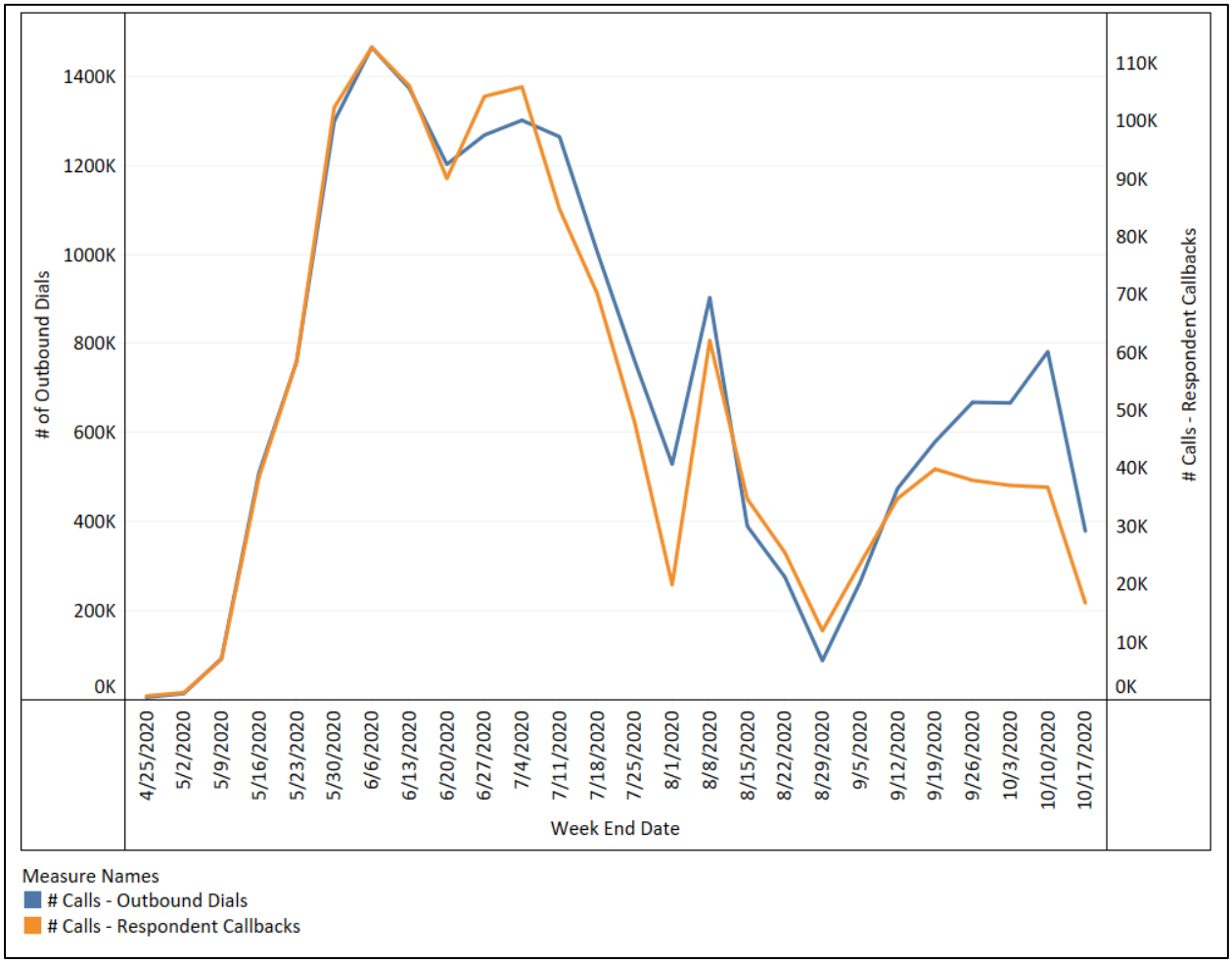



Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "RCB Timing."

There were 584,320 respondent callbacks that occurred following an Outbound Dial dispositioned as an answering machine. Of these, 70.4 percent occurred on the same day. The majority, as seen in Figure 36, occurred within the first 29 minutes following the voicemail. The

average was 22.9 hours following the voicemail and the median was 1.7 hours. There were 25,242 respondent callbacks that occurred over four days following a voicemail, the longest being 33 days following the last voicemail, which ultimately drove the average up.

*Figure 37. Outbound: Respondent Callbacks vs. Outbound Dials*




Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Respondent Callbacks by Day and Hour EOP."
The CQA Operational Week is from Sunday to Saturday; all dates refer to the week end date.

Figure 37 above is a dual-axis chart that compares when all respondent callbacks occurred in relation to all outbound dials. The Y-axis for Outbound Dials peaked at 1,464,961 while the Y-axis for respondent callbacks peaked at 112,671. The line graph is used to show a trend on when respondent callbacks occurred in relation to outbound dials. Both lines follow the same peaks and dips throughout the operation, with slight variation. This was expected given the median time between a voicemail and respondent callback was 1.7 hours.

31. What was the contact rate for reaching an eligible respondent?

There were 6,993,103 calls handled during the CI Outbound operation, including outbound dials and respondent callbacks. Of those, 1,701,893, or 24.3 percent, reached an eligible respondent. An eligible respondent includes only the calls where a partial or complete interview was obtained. During 2,575,279 calls, or 36.8 percent, a person was reached, however, the CSR was unable to finish the interview because of language barrier, refusal, threat, or because the respondent was unavailable. The remaining 38.9 percent of handled calls fall into the category undetermined respondent. These are handled calls where the CSR experience a technical error, the call was disconnected, the CSR encountered a fax or answering machine, or when a disposition was not selected.

32. What was the number of cases completed?
    a. Total.
    b. By hour of the day.
    c. By day of the week.
    d. By week of data collection.

*Figure 38. Outbound: Completed Cases by Hour and Day of Week*

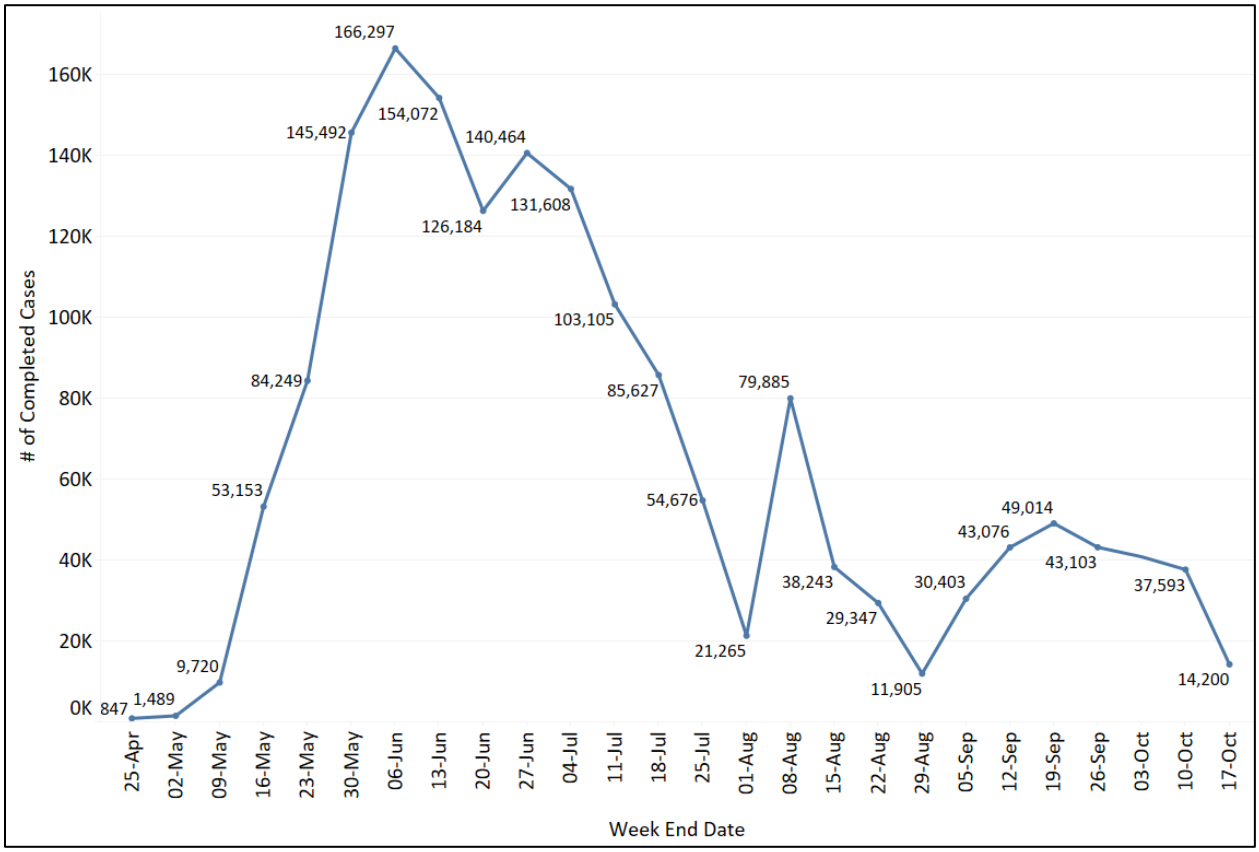
| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | **Total** |
|---|---|---|---|---|---|---|---|---|
| 12 a.m. | 1 | 1 | 6 | 5 | 6 | 9 | 5 | **33** |
| 1 a.m. | 2 | | 3 | 4 | 6 | 5 | 3 | **23** |
| 5 a.m. | 116 | 229 | 408 | 421 | 398 | 380 | 203 | **2,155** |
| 6 a.m. | 230 | 8,922 | 10,147 | 10,364 | 11,144 | 11,390 | 443 | **52,640** |
| 7 a.m. | 465 | 14,456 | 16,758 | 16,044 | 17,922 | 21,374 | 7,843 | **94,862** |
| 8 a.m. | 551 | 19,459 | 22,794 | 20,423 | 22,540 | 26,351 | 11,735 | **123,853** |
| 9 a.m. | 2,979 | 22,936 | 24,606 | 22,309 | 23,714 | 28,165 | 12,350 | **137,059** |
| 10 a.m. | 3,960 | 23,400 | 26,817 | 24,663 | 25,385 | 25,442 | 12,493 | **142,160** |
| 11 a.m. | 4,480 | 25,951 | 28,047 | 25,071 | 25,643 | 26,538 | 12,215 | **147,945** |
| 12 p.m. | 4,492 | 25,256 | 27,216 | 25,428 | 22,928 | 27,682 | 11,191 | **144,193** |
| 1 p.m. | 4,714 | 26,968 | 27,832 | 25,195 | 24,591 | 27,683 | 10,825 | **147,808** |
| 2 p.m. | 4,391 | 25,473 | 26,218 | 24,916 | 22,419 | 26,476 | 9,504 | **139,397** |
| 3 p.m. | 4,041 | 25,106 | 25,700 | 24,950 | 21,035 | 23,512 | 8,220 | **132,564** |
| 4 p.m. | 4,112 | 22,979 | 23,467 | 21,368 | 18,688 | 19,340 | 6,371 | **116,325** |
| 5 p.m. | 4,203 | 20,547 | 21,004 | 18,964 | 16,989 | 16,824 | 6,076 | **104,607** |
| 6 p.m. | 3,825 | 16,687 | 17,461 | 14,873 | 13,206 | 13,263 | 4,740 | **84,055** |
| 7 p.m. | 2,857 | 11,122 | 11,705 | 10,424 | 9,747 | 9,795 | 3,685 | **59,335** |
| 8 p.m. | 2,050 | 7,077 | 8,036 | 6,782 | 5,958 | 6,315 | 2,821 | **39,039** |
| 9 p.m. | 1,620 | 4,841 | 5,328 | 4,825 | 3,859 | 4,330 | 2,147 | **26,950** |
| 10 p.m. | 49 | 122 | 114 | 137 | 104 | 113 | 70 | **709** |
| 11 p.m. | 3 | 14 | 10 | 17 | 6 | 6 | 9 | **65** |
| **Total** | **49,141** | **301,546** | **323,677** | **297,183** | **286,288** | **314,993** | **122,949** | **1,695,777** |

Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Cases Completed by Hour Heat Map Viz."
*The Hour of Day is in Mountain Time Zone (MT). Hour 12 a.m. includes all calls that were completed from midnight to 12:59 a.m. MT. Hour 1 a.m. includes all cases completed from 1:00 a.m. MT to 1:59 a.m. MT, etc.

There were 1,695,777 Closed Completed Cases during the CI Outbound operation. Cases that were dispositioned as Completed Interview or Partial Interview were grouped together under the Closed Completed case status.

As seen in Figure 38, the highest number of closed completed cases occurred on Tuesdays, with 323,677 closed completed cases. Fridays had the next highest number of closed completed cases, with 314,993 closed completed cases. The highest hour of day was 11 a.m., with 147,945 closed completed cases, followed closely by 1 p.m. with 147,808 closed completed cases. The least amount of closed completed cases occurred on Sundays, accounting for less than 2.9 percent of all closed completed cases.

*Figure 39. Outbound: Completed Cases by Week of Operation*




Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Cases Completed by Hour Heat Map Viz."
The CQA Operational Week is from Sunday to Saturday; all dates refer to the week end date.

As seen in Figure 39, closed completed cases peaked at 166,297 during Week 7 (May 31 – June 6, 2020).

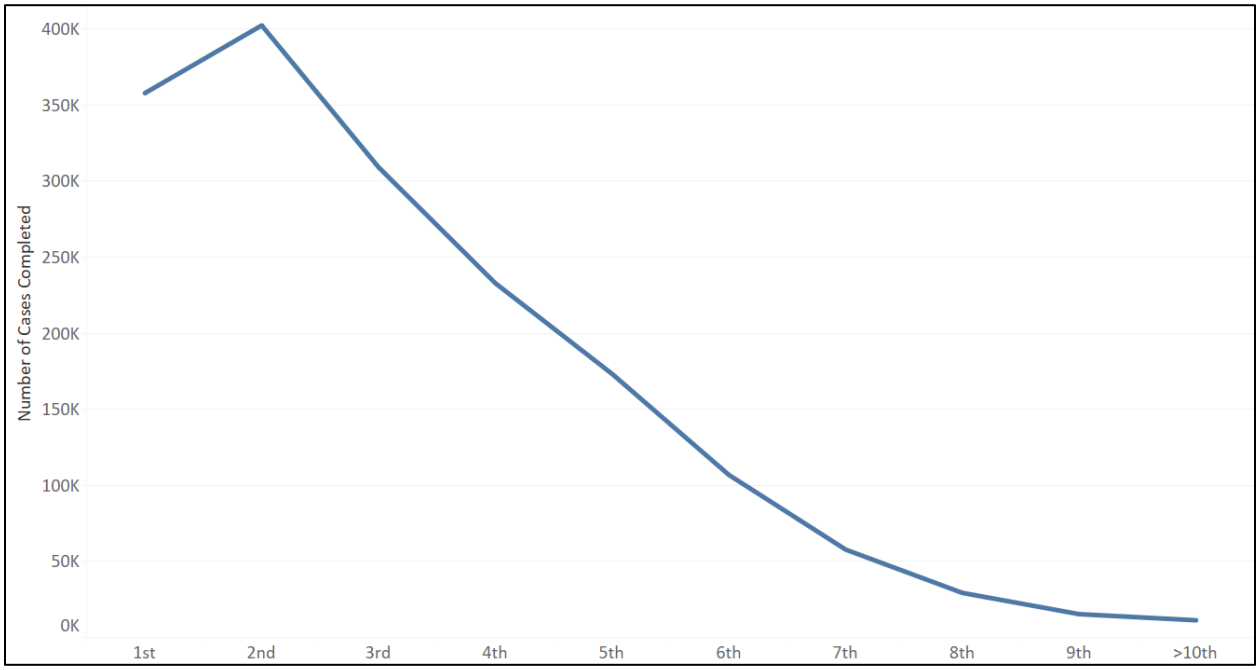
33. How many dial attempts before the case was completed?

*Table 32. Outbound: Completes by Attempt*

| | # of Complete Cases | % of Complete Cases |
|---|---|---|
| **Total** | **1,695,777** | **100%** |
| Attempt 1 | 357,812 | 21.1% |
| Attempt 2 | 402,327 | 23.7% |
| Attempt 3 | 309,127 | 18.2% |
| Attempt 4 | 232,877 | 13.7% |
| Attempt 5 | 173,240 | 10.2% |
| Attempt 6 | 106,826 | 6.3% |
| Attempt 7 | 57,738 | 3.4% |
| Attempt 8 | 29,259 | 1.7% |
| Attempt 9 | 15,294 | 0.9% |
| Attempt 10+ | 11,271 | 0.7% |
| No Attempts | 6 | 0.0% |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Outbound Case and Calls."

*Figure 40. Outbound: Completes by Attempt*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Outbound Case and Calls."

More than 75 percent of all Completed Outbound CI cases were completed on or before the fourth attempt. Cases that were dispositioned as Completed Interview or Partial Interview were grouped together under the Closed Completed case status. The majority of cases, as seen in Table 32, were completed during the second attempt. The rate of completion fell to less than 2

percent following attempt number seven. Respondent callbacks were considered attempts. For example, the first attempt at a case was a voicemail, the second attempt was a respondent callback that resulted in a complete. In this example, the case would be included in the 402,327 cases completed during the second attempt.

There were six cases completed without an attempt on record, because of CSR error.

34. How many cases were completed after a "refusal" disposition on a previous call?

*Table 33. Outbound: Number of Cases Closed after Refusal, by Case Language*

| | Cases – Closed Completed (After Refusal) | Cases – Closed (After Refusal) | Completed / Closed (After Refusal) Percentage |
|---|---|---|---|
| **Total** | **306,739** | **905,203** | **33.9%** |
| **English** | 289,103 | 862,879 | 33.5% |
| **Spanish** | 17,636 | 42,324 | 41.7% |

Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Outbound Cases Closed Completed after Refusal or Language Barrier."
The Case Language is the final language of the case.

Table 33 shows that of the 905,203 cases that were closed after a refusal disposition, 306,739 of them were Closed Completed. Cases that were dispositioned as Completed Interview or Partial Interview were grouped together under the Closed Completed case status. There were two refusal dispositions: Refusal – Nonaggressive and Refusal – Aggressive.

During an attempt, the CSR had the ability to disposition the call as a Refusal – Aggressive if the respondent was using profanity or abusive language. The Refusal – Aggressive disposition would result in immediate case closure. However, if the respondent immediately hung up, or politely refused, the CSR had the ability to disposition the call as Refusal – Nonaggressive. It took three instances of the Refusal – Nonaggressive disposition to result in case closure.

As seen in Table 33, 33.9 percent of cases that received a refusal disposition during a previous attempt were successfully Closed Completed. Spanish cases had a higher refusal conversion rate, at 41.7 percent.

35. How many cases were completed after a "language barrier" disposition on a previous call?

*Table 34. Outbound: Number of Cases Closed after Language Barrier, by Case Language*

| | Cases – Closed Completed (After Language Barrier) | Cases – Closed (After Language Barrier) | Completed / Closed (After Language Barrier) Percentage |
|---|---|---|---|
| **Total** | **28,641** | **53,755** | **53.3%** |
| English | 2,937 | 13,170 | 22.3% |
| Spanish | 25,704 | 40,585 | 63.4% |

Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Outbound Cases Closed Completed after Refusal or Language Barrier."
The Case Language is the final language of the case.

Table 34 shows that of the 53,755 cases that were closed after a language barrier disposition, 53.3 percent of them were Closed Completed. Cases that were dispositioned as Completed Interview or Partial Interview were grouped together under the Closed Completed case status. There were three language barrier dispositions: Language Barrier – Transfer to English, Language Barrier – Transfer to Spanish, and Language Barrier Other Than English or Spanish.

Using the language of the original Census response, every CI Outbound case was assigned a language, either English or Spanish, during case selection. Unlike the Inbound Operation, calls could not be transferred between language lines for the CI Outbound operation. During an attempt, the CSR had the ability to disposition the call as a Language Barrier if the respondent did not speak the case language. When the disposition "Language Barrier – Transfer to English" was selected by the CSR, the case language was automatically updated from Spanish to English. When the disposition "Language Barrier – Transfer to Spanish" was selected, the case language was automatically updated from English to Spanish. The following call for these cases would be handled in the updated language. When the disposition "Language Barrier Other Than English or Spanish" was selected, the case language would remain the same. However, two instances of the "Language Barrier Other Than English or Spanish" resulted in case closure.

As seen in Table 34, the majority of cases that received a language barrier disposition during a previous attempt were successfully Closed Completed. This is specifically true for cases with the final case language of Spanish, where 63.4 percent were Closed Completed.

36. What was the approach and outcome of holiday dialing (Easter, Mother's Day, Memorial Day, Father's Day, and Independence Day) during the operational period?

*Table 35. Outbound: Holiday Dialing*

| | Outbound Dial Attempts | Answering Machines | Respondent Callbacks w/ Census ID | Cases Closed Completed |
|---|---|---|---|---|
| **Memorial Day** | 231,416 | 145,108 (62.7%) | 8,004 | 22,194 (10.6%) |
| **Father's Day** | 57,208 | 36,501 (63.8%) | 1,116 | 3,187 (5.6%) |
| **Independence Day** | 92,445 | 60,973 (66.0%) | 2,468 | 6,179 (7.2%) |
| **Labor Day** | 102,210 | 57,715 (56.5%) | 2,309 | 10,038 (10.0%) |
| **Columbus Day** | 88,201 | 49,384 (56.0%) | 1,683 | 4,433 (5.3%) |

Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Coverage Improvement: Activity by Day."

The original approach, determined prior to the start of operations, for Easter and Mother's Day was to reduce overall staffing hours, allow for scheduled callbacks and respondent callbacks, and only proactively dial Outbound if Inbound call volume was low, as determined by the Work Force Optimization team. All other holidays were to be treated as a regular dialing day.

The Outbound CI operation began on April 22, 2020, therefore, dialing on Easter, Sunday, April 12, was not considered. The Outbound CI operation started weekend dialing and support on May 23, therefore dialing on Mother's Day, Sunday, May 10, was not considered.

Per the original approach, all other holidays throughout the Outbound CI operation were treated as a regular dialing day.

As seen in Table 35, the holidays with the highest completion rate were Memorial Day and Labor Day, both of which fell on a Monday. Columbus Day, which also fell on a Monday, had the lowest rate of answering machines at 56.0 percent, but also had the lowest completion rate at 5.3 percent. Father's Day, which fell on a Sunday, had the second lowest completion rate at 5.6 percent.

37. What was the AHT, by language, for completed[23] vs. noncompleted cases?
    a. Outbound dial.
    b. Respondent callback.

*Table 36. Outbound: Average Handle Time (AHT) of Outbound Calls, by Case Status*

| | Completed AHT (mm:ss) | Other AHT (mm:ss) | Total AHT (mm:ss) |
|---|---|---|---|
| **Total** | **06:16** | **01:08** | **02:23** |
| English - Outbound Dial | 05:46 | 01:03 | **01:56** |
| English – Respondent Callback | 07:13 | 02:15 | **05:25** |
| Spanish - Outbound Dial | 06:24 | 01:07 | **02:36** |
| Spanish – Respondent Callback | 08:05 | 02:33 | **05:35** |

Source: U.S. Census Bureau, 2020 Census, CQA End of Program Interactive Tableau Workbook, "Coverage Improvement AHT."

[23]Completed case - When a CSR sufficiently finishes the interview with the respondent.

The AHT for the Outbound operation was 2 minutes, 23 seconds. Calls that were dispositioned as Completed Interview or Partial Interview were grouped together under the "Completed" column, while all other handled calls were grouped together under the "Other" column, as seen in Table 36. Completed Spanish respondent callbacks had the highest AHT at 8 minutes, 5 seconds. Other English Outbound Calls had the lowest AHT at 1 minute, 3 seconds.

38. What was the final outcome of each case?

*Table 37. Outbound: Case Status*

| | # of Cases | % of Cases |
|---|---|---|
| **Total – Cases Attempted** | **3,782,515** | **100%** |
| Cases Closed | 3,500,857 | 92.6% |
| Case Closed – Completed | 1,695,777 | 44.8% |
| Case Closed – Completed Interview | 1,687,521 | 44.6% |
| Case Closed – Partial Interview | 8,256 | 0.2% |
| Case Closed – Not Completed | 1,805,080 | 47.7% |
| Aggressive Refusal | 38,034 | 1.0% |
| Congressional Do Not Call | 1,436 | 0.0% |
| Max Answering Machines | 1,212,187 | 32.0% |
| Max Attempts | 288,773 | 7.6% |
| Max Language Barriers | 5,149 | 0.1% |
| Max Refusals | 189,657 | 5.0% |
| Qualified Respondent Never Available | 69,685 | 1.8% |
| Threat | 159 | 0.0% |
| Cases Open | 281,658 | 7.4% |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Outbound Cases Closed Detail."

Of the 8,743,662 Outbound CI cases received, 3,782,515, or 43.3 percent, were attempted. The other 56.6 percent of cases received were never attempted. At the end of operations, 281,658 cases remained opened. These cases, accounting for 7.4 percent of all attempted cases, received at least one attempt on or before October 15, however, did not meet the criteria to be closed.

Prior to the start of operations, CQA set a goal of 40 percent completion rate for the Outbound CI operation. The Outbound CI operation exceeded this goal, with a final completion rate of 44.8 percent of all attempted cases, as seen in Table 37. Max Answering Machines had the second highest case closed status with 1,212,187 cases closed, or 32.0 percent.

## 5.3 Overall Quality Metrics

39. How many standard quality evaluations were completed?

There were 78,953 total standard evaluations completed during the CQA program. More than 62 percent of standard evaluations were for the Inbound operation, and 38 percent were in support of the Outbound CI operation.

Of the 78,953 standard evaluations, 47 percent were DQAs and 53 percent were QAEs. DQAs assess how accurately a CSR captures data and QAEs assess the customer service skills of the CSR as well as the accuracy of information provided to respondents, such as script adherence. Table 38 below shows the total number of standard evaluations for the Inbound and Outbound operations.

*Table 38. Quality: Standard Evaluations Completed*

| Type of Evaluation | Inbound | Outbound CI | CQA Total |
|---|---|---|---|
| **Total Evaluations (DQA & QAE)** | **49,490** | **29,463** | **78,953** |
| Data Quality Audit (DQA) | 22,406 | 14,492 | 36,898 |
| Quality Audit Evaluation (QAE) | 27,084 | 14,971 | 42,055 |

Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Quality: Monitoring Summary – PTD."

40. How well did CSRs adhere to DQA and QAE standards?

The contractual SLA quality scores for both DQA and QAE were 97.0 percent, which the CQA program achieved. The overall average of quality scores was 97.4 percent, with CSRs achieving 97.8 percent on DQAs and 97.1 percent on QAEs.

For Inbound, the average DQA score was 97.0 percent, and the QAE score was slightly less at 96.4 percent. The overall average quality score for the Inbound program was just under the target at 96.7 percent. CSRs fared better when it came to the Outbound operation: DQA evaluations had an average score of 99.0 percent, and QAE evaluations averaged 98.2 percent, making the overall standard quality score for outbound 98.6 percent.

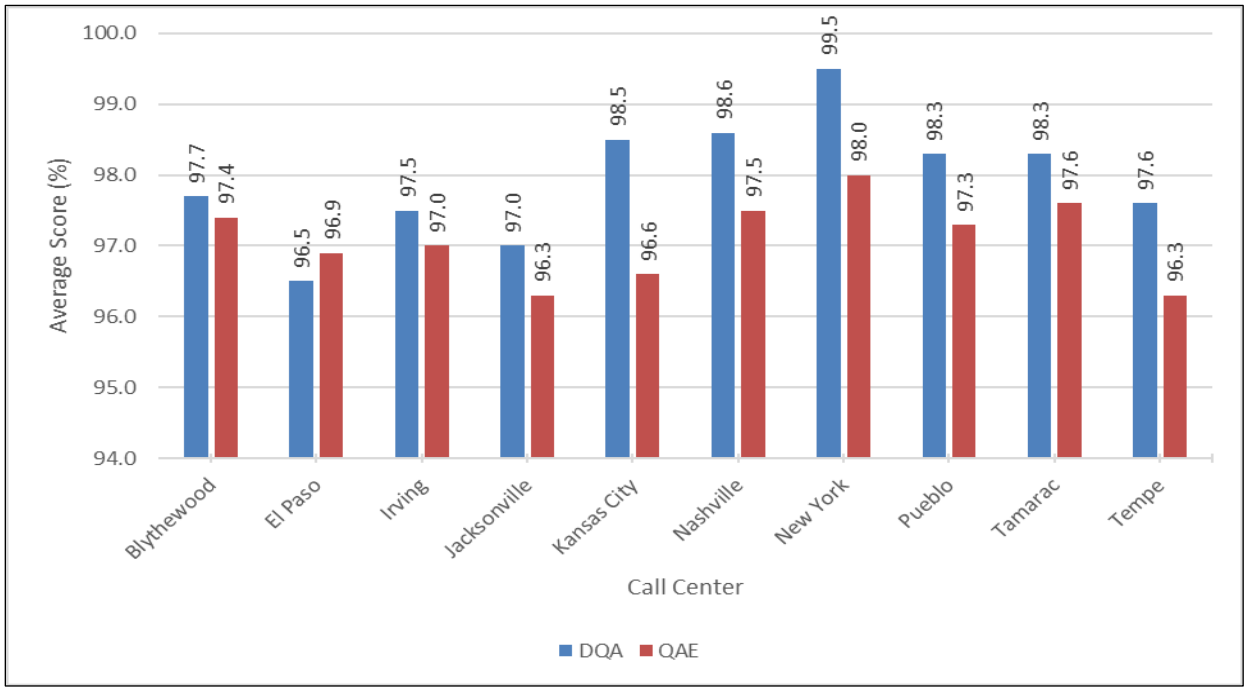
*Table 39. Quality: Standard Evaluation Scores*

| Type of Evaluation | Inbound Average Score (%) | Outbound Average Score (%) | CQA Total Average Score (%) |
|---|---|---|---|
| **Total Evaluations (DQA & QAE)** | **96.7** | **98.6** | **97.4** |
| Data Quality Audit (DQA) | 97.0 | 99.0 | 97.8 |
| Quality Audit Evaluation (QAE) | 96.4 | 98.2 | 97.1 |

Source: U.S. Census Bureau, 2020 Census, CQA Daily Briefing Report, "Quality: Monitoring Summary – PTD."

Apart from the El Paso site, each CQA call center achieved the 97 percent target average score for DQA evaluations. The El Paso, Jacksonville, Kansas City, and Tempe call center sites did not meet the 97 percent target on QAE evaluations, but the CQA program did. The New York call center site, which was staffed entirely by NENS CSRs, achieved the highest DQA and QAE scores of all sites (99.5 percent and 98.0 percent, respectively). Every call center saw higher average DQA scores than QAE scores except for El Paso. See Figure 41 below for a comparison of average standard evaluation scores by call center.

*Figure 41. Quality: Standard Evaluation Scores by Site*



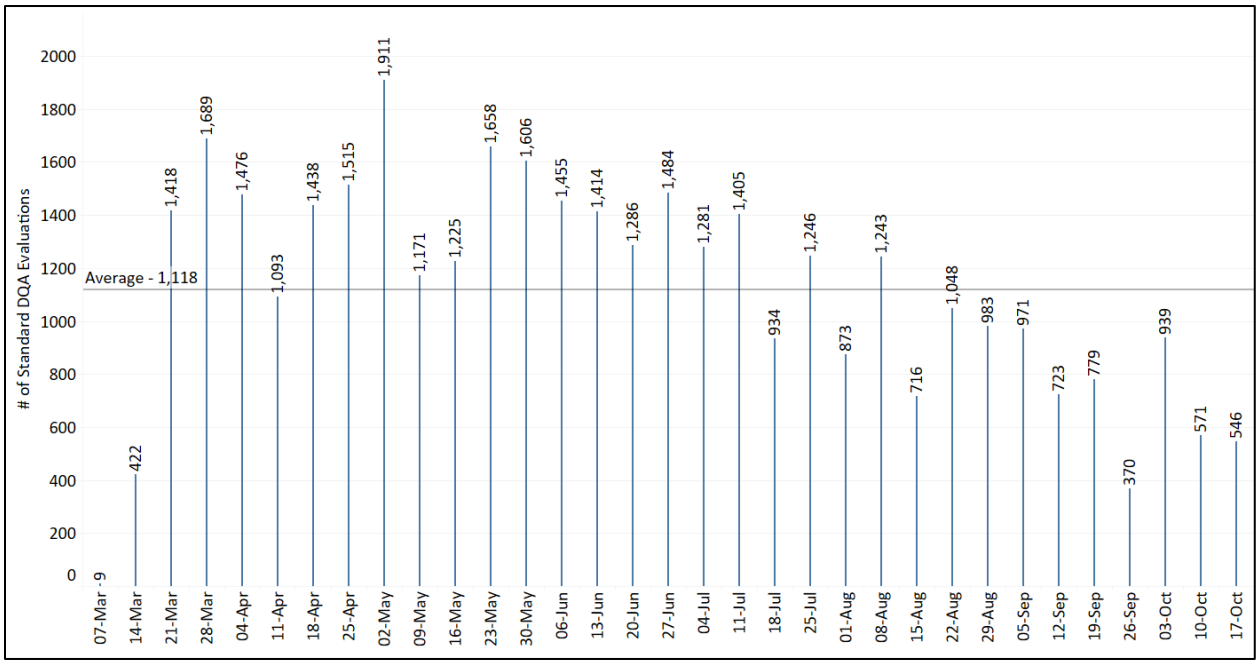

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality DQA and QAE by Site."

During operations, there were 3,260 standard evaluations that resulted in critical fails occurring during CSRs' grace periods. CSRs received a waiver for the first critical fail evaluation that occurred for calls handled for the Inbound and Outbound operations. The critical fail waiver allowed CSRs to learn from the experience and take corrective action. A CSR's first occurrence of a critical fail for both Inbound and Outbound did not count toward the CSR's or the CQA program's average quality score.

41. How many standard evaluations were completed each week?

There were 36,898 standard DQA evaluations[24]. The week with the highest amount of standard DQA evaluations was from April 26 to May 2, 2020, with 1,911 standard DQA evaluations. The average amount of standard DQA evaluations per week was 1,118. Figure 42 shows the number of DQA evaluations by week of operation.

*Figure 42. Quality: Standard DQA Evaluations by Week*

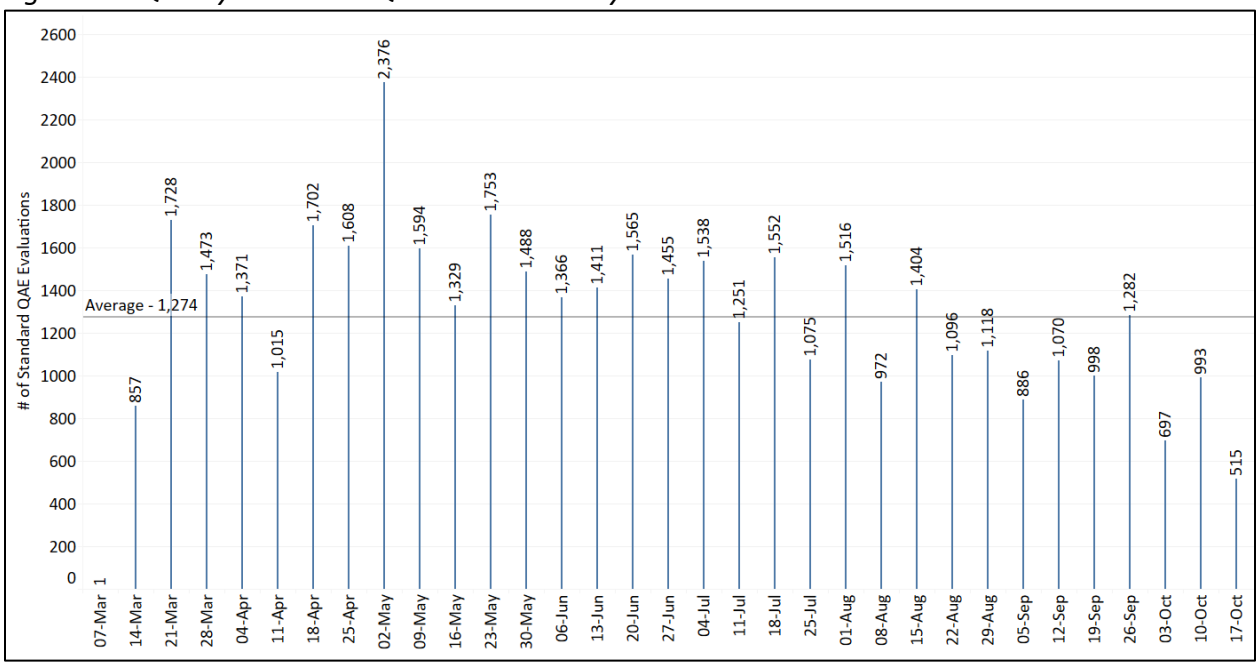



Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality DQA and QAE by Week."

There were 42,055 standard QAE evaluations[25]. The week with the highest number of QAE evaluations was also from April 26 to May 2, 2020, with 2,376 QAE evaluations. The average number of QAE evaluations per week was 1,274. Figure 43 shows the number of QAE evaluations by week of operation.

[24] This total does not include those critical fails occurring during a CSR's grace period.
[25] This total does not include those critical fails occurring during a CSR's grace period.

*Figure 43. Quality: Standard QAE Evaluations by Week*



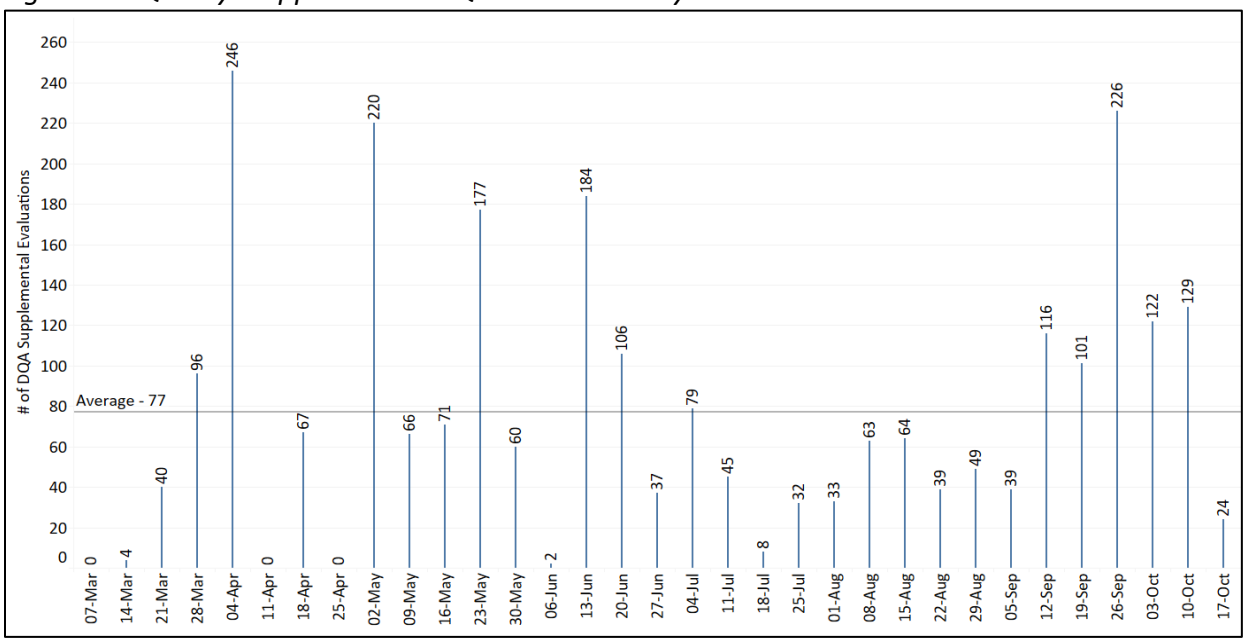

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality DQA and QAE by Week."

42. How many supplemental evaluations were completed each week?

If CSRs received a critical fail score, they may have been flagged for supplemental quality monitoring. Supplemental evaluations could expose the frequency or severity of errors in script adherence, poor customer service, or other inappropriate behaviors.

There were 2,545 supplemental DQA evaluations. The week with the highest number of supplemental DQA evaluations was from March 29 to April 4, 2020, with 246 supplemental evaluations. The average number of supplemental DQA evaluations per week was 77. See Figure 44 for a breakdown of supplemental DQA evaluations by week.

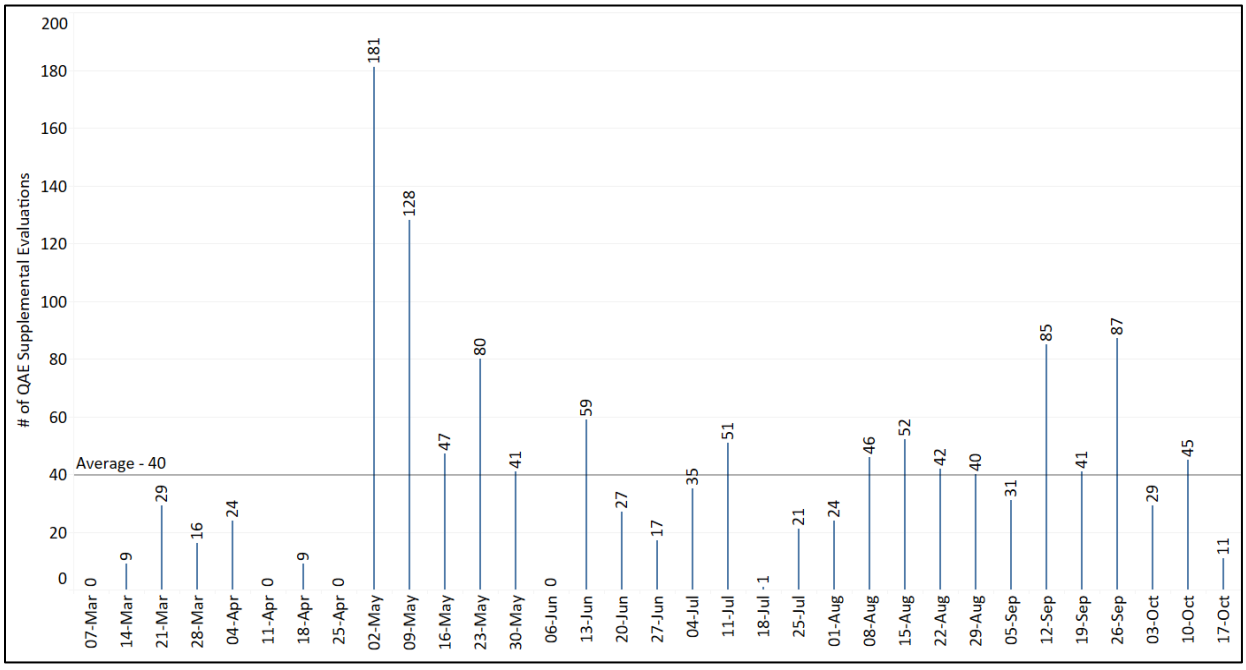
*Figure 44. Quality: Supplemental DQA Evaluations by Week*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality DQA and QAE by Week."

There were 1,308 supplemental QAE evaluations. The week with the highest number of supplemental QAE evaluations was from April 26 to May 2, 2020, with 181 supplemental evaluations. The average number of supplemental QAE evaluations per week was 40. See Figure 45 for a breakdown of supplemental QAE evaluations by week.

*Figure 45. Quality: Supplemental QAE Evaluations by Week*

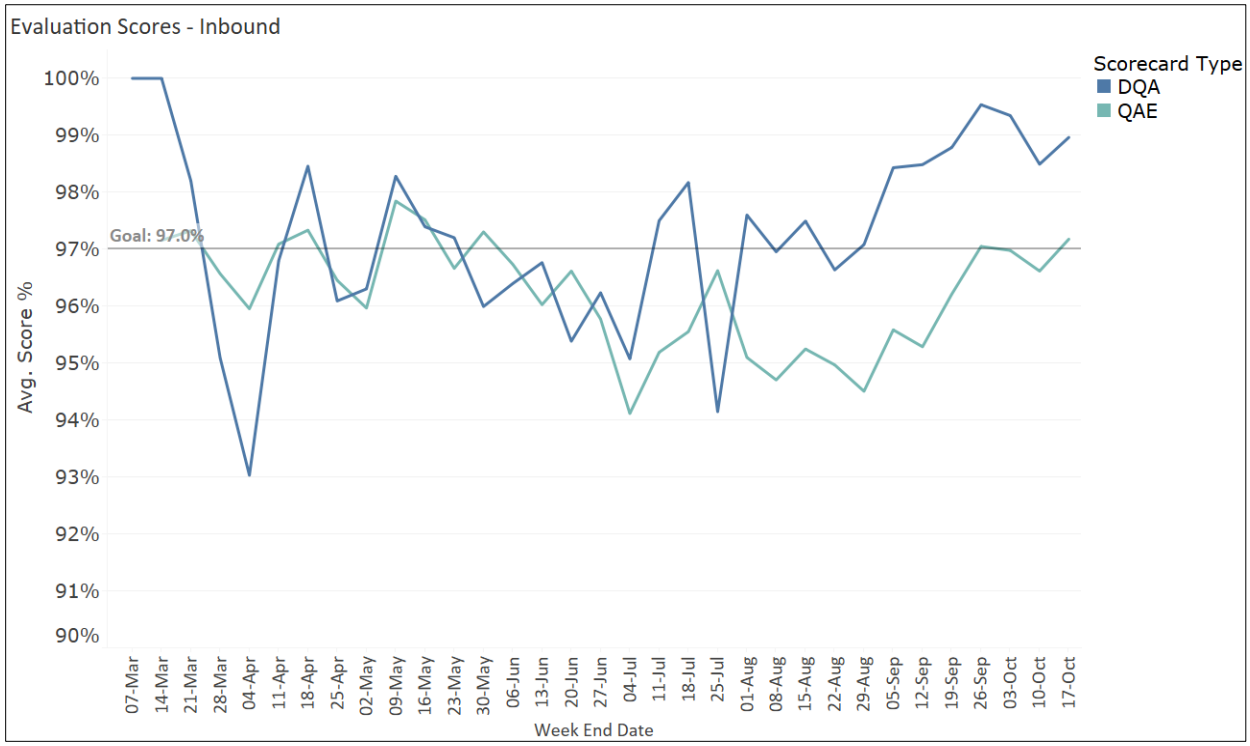



Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality DQA and QAE by Week."

43. What were the average quality scores by week of operation?

To show weekly trends, quality scores were averaged for each operational week, based on when the call occurred. The following two figures show the weekly DQA and QAE scores for the Inbound and Outbound programs over a weekly basis throughout operations.

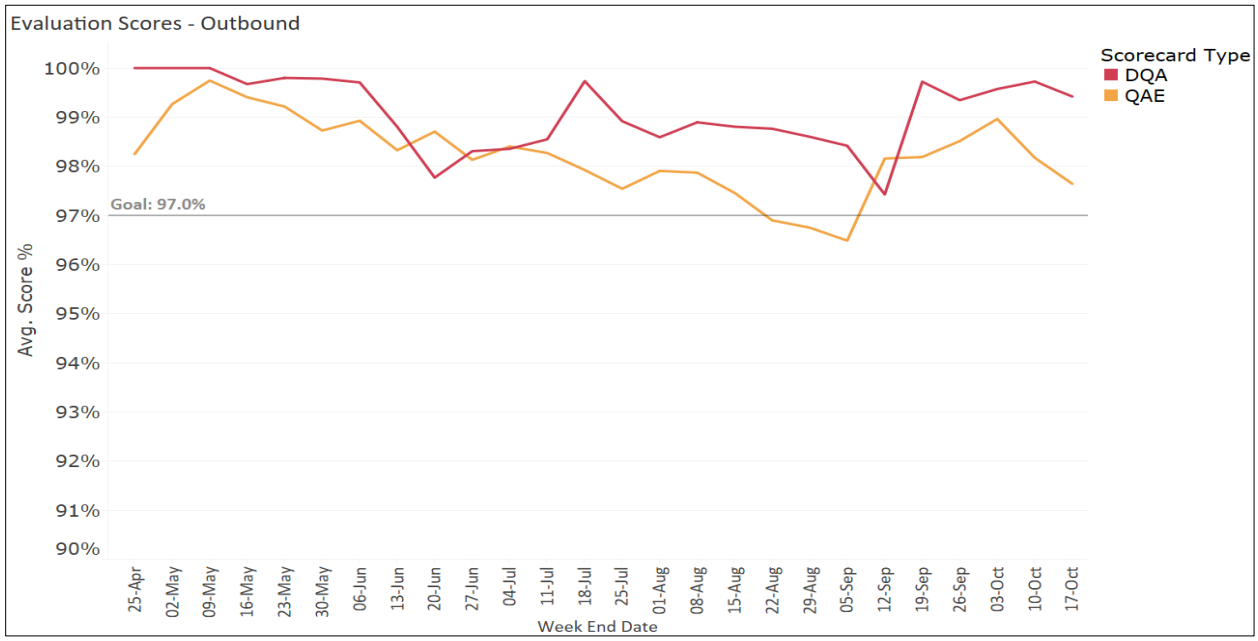
*Figure 46. Quality Scores by Week – Inbound*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality Performance Scores by Inbound Outbound."

As shown in Figure 46 above, the week with the lowest DQA score for the Inbound program was March 29 through April 4, 2020, with an average score of 93.0 percent. After the first week, the week with the next highest DQA score for the Inbound program was September 20 through September 26, 2020, with 99.5 percent. The QAE scores for the Inbound program ranged from 94.1 to 97.8 percent.

*Figure 47. Quality Scores by Week - Outbound*

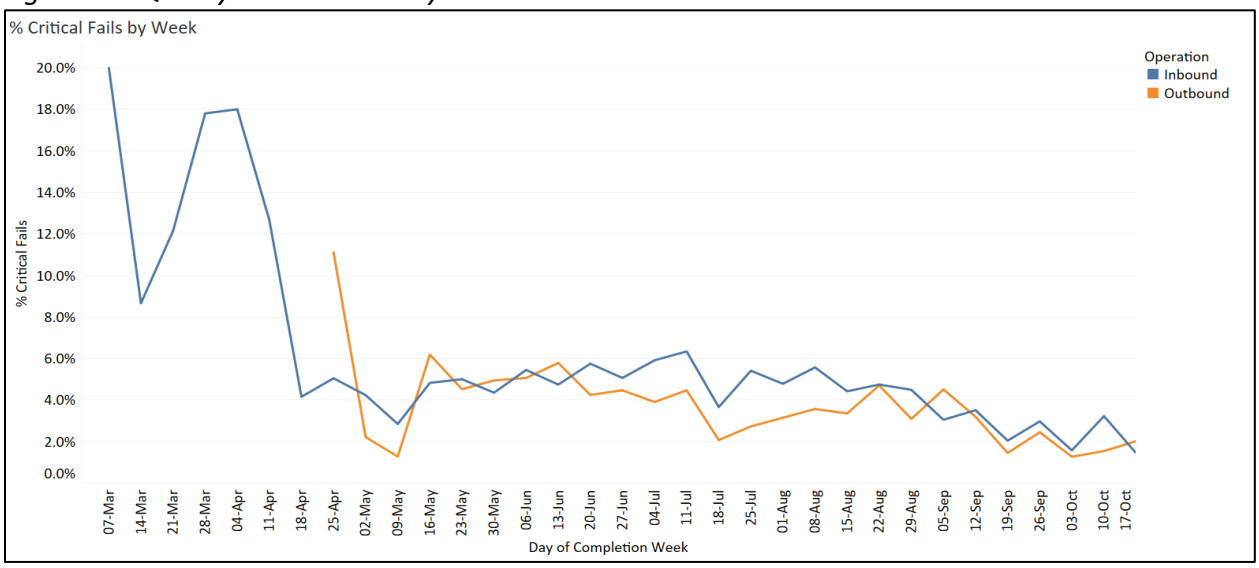



Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality Performance Scores by Inbound Outbound."

As shown in Figure 47 above, the week with the lowest QAE score for the Outbound program was 96.5 percent for the week August 30 through September 5, 2020. The DQA scores for the Outbound program ranged from 97.4 to 100.0 percent.

44. How many critical fails did CSRs receive by week of operation?

*Figure 48. Quality: Critical Fails by Week*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Critical Fail Analysis."

There were 4,769 critical fails, of which 3,260 were grace period critical fails, total for the CQA program. The Inbound operation had 3,606 critical fails, of which 2,408 were grace period critical fails. The Outbound CI operation had 1,163 critical fails, of which 852 were grace period critical fails.

Following the first week of operations, the week with the next highest percent of critical fails for Inbound was March 29 to April 4, 2020. During this week, there were 3,127 evaluations, of which 563, or 18 percent, were critical fails. Following the first week of operations, the week with the next highest percent of critical fails for Outbound was May 10 to May 16, 2020. During this week, there were 549 evaluations, of which 34, or 6.2 percent, were critical fails. Figure 48 above shows the percent of critical fails by week of operation.

45. What were the average quality scores by language?

Table 40 below shows the average quality scores for the Inbound program. Table 40 does not include grace period critical fails.

*Table 40. Quality: Standard Evaluation Scores - Inbound*

| Evaluation | Language | # of Evaluations | Avg. Score (%) |
|---|---|---|---|
| **Total** | | **47,082** | **96.7** |
| **DQA** | English | 17,953 | 97.3 |
| | Spanish | 1,536 | 92.0 |
| | Chinese Mandarin | 129 | 99.2 |
| | Chinese Cantonese | 120 | 99.2 |
| | Vietnamese | 76 | 100.0 |
| | Korean | 107 | 99.1 |
| | Russian | 143 | 99.3 |
| | Arabic | 47 | 97.9 |
| | Tagalog | 72 | 100.0 |
| | Polish | 58 | 98.3 |
| | French | 46 | 93.5 |
| | Haitian Creole | 33 | 97.0 |
| | Portuguese | 47 | 93.6 |
| | Japanese | 30 | 100.0 |
| | **Total** | **20,397** | **97.0** |
| **QAE** | English | 23,352 | 96.5 |
| | Spanish | 2,158 | 95.5 |
| | Chinese Mandarin | 176 | 96.7 |
| | Chinese Cantonese | 121 | 97.6 |
| | Vietnamese | 79 | 99.6 |
| | Korean | 148 | 98.7 |
| | Russian | 172 | 97.7 |
| | Arabic | 52 | 94.2 |
| | Tagalog | 116 | 96.0 |
| | Polish | 37 | 96.9 |
| | French | 83 | 97.9 |
| | Haitian Creole | 65 | 92.9 |
| | Portuguese | 39 | 88.1 |
| | Japanese | 87 | 96.1 |
| | **Total** | **26,685** | **96.4** |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality Performance Scores by Inbound Outbound."

Spanish had the lowest DQA score with 92.0 percent, while Portuguese had the lowest QAE score with 88.1 percent. Japanese, Tagalog, and Vietnamese had a perfect 100 percent DQA score. Vietnamese also had the highest QAE score of 99.6 percent.

Outbound CI was conducted in English and Spanish. Table 41 below shows the average quality scores for the Outbound CI program. Table 41 does not include grace period critical fails.

*Table 41. Quality: Standard Evaluation Scores - Outbound*

| Evaluation | Language | # of Evaluations | Avg. Score (%) |
|---|---|---|---|
| **Total** | | **28,611** | **98.6** |
| **DQA** | English | 12,753 | 98.9 |
| | Spanish | 1,135 | 99.6 |
| | Total | 13,888 | 99.0 |
| **QAE** | English | 13,320 | 98.2 |
| | Spanish | 1,403 | 98.6 |
| | Total | 14,723 | 98.2 |

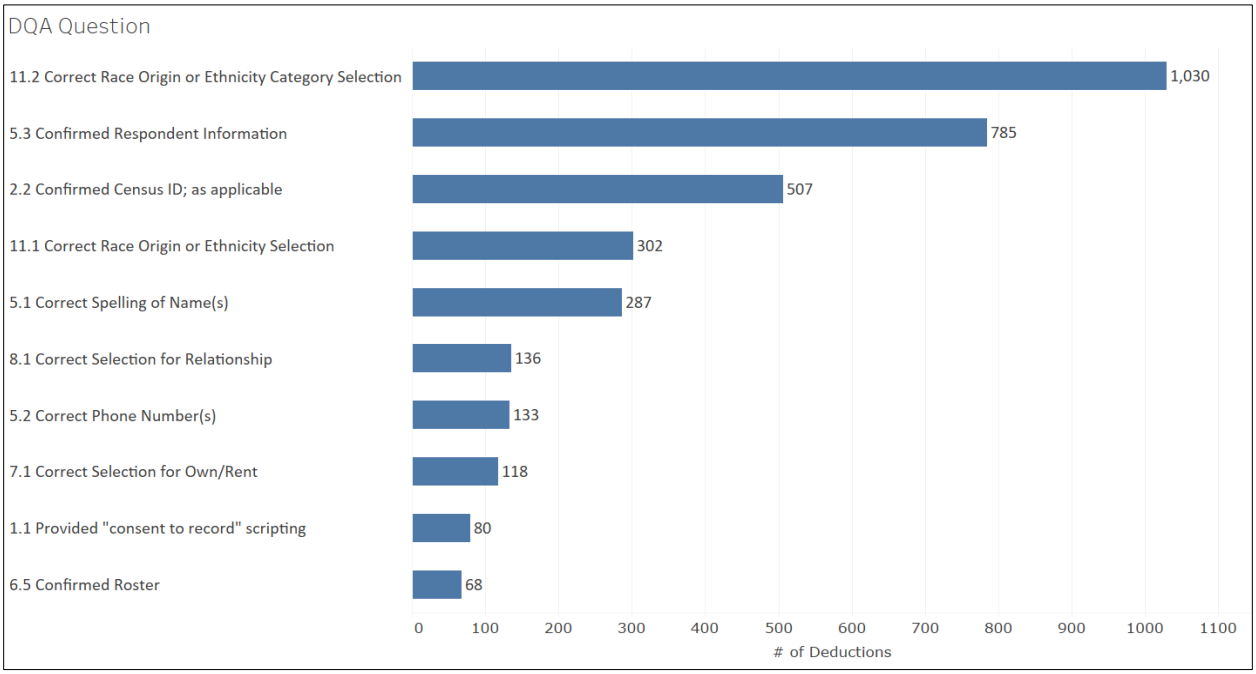
Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Quality Performance Scores by Inbound Outbound."

The English CSRs had slightly higher DQA and QAE scores compared to Spanish CSRs for the Outbound CI program. All average scores in the Outbound CI Program are above the 97 percent target.

46. What were the top DQA scorecard deductions received?

QMs had to accurately score call evaluations as defined in the DQA scorecards, as seen in Appendices F and G. If the CSR did not meet the criteria in the scorecard, the QM would deduct their score. Figure 49 below shows the top deductions for the entire Inbound program, specific to the DQA scorecards. Figure 49 includes all deductions for the entire Inbound program, including deductions captured during grace period critical fails.

*Figure 49. Quality: Top Ten Deductions – Inbound DQA*

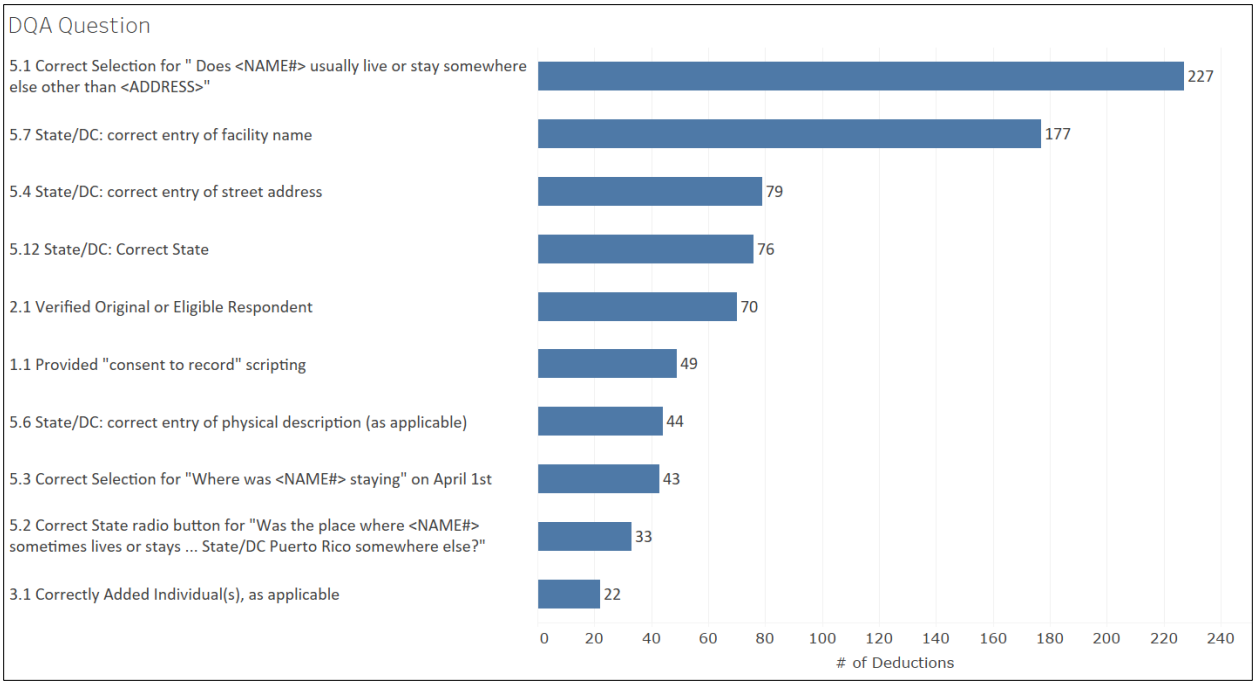



Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Deductions by Section and Question."

The top deduction on the DQA scorecard for the Inbound Program was Section 11.2, "Correct Race Origin or Ethnicity Category Selection," with 1,030 deductions across the entire program.

Figure 50 below shows the top deductions for the entire Outbound program, specific to the DQA scorecards. Figure 50 includes all deductions for the entire Outbound program, including deductions captured during grace period critical fails.

*Figure 50. Quality: Top Ten Deductions – Outbound DQA*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Deductions by Section and Question."

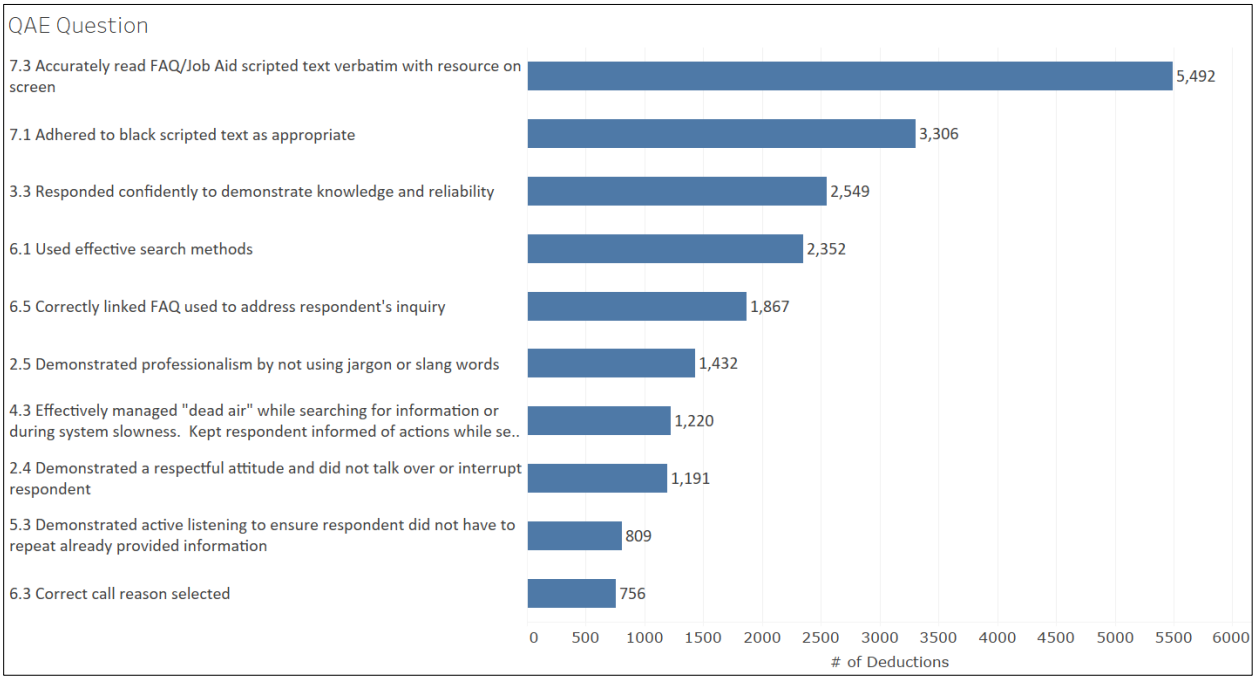
The top deduction on the DQA scorecard for the Outbound Program was Section 5.1, "Correct Selection for 'Does <NAME#> usually live or stay somewhere else other than <ADDRESS>,'" with 227 deductions across the entire program. The criteria in Section 5.1 refers to the "Overcount" question that is asked for each person in the household. For example, if the respondent indicated that a child on their roster was living or staying at college, the CSR should have selected the "College" response and moved forward in the interview. The deduction indicates that the CSR did not select the correct response for this question.

47. What were the top QAE scorecard deductions received?

QMs had to accurately score call evaluations as defined in the QAE scorecards, as seen in Appendices F and G. If the CSR did not meet the criteria in the scorecard, the QM would deduct their score. Figure 51 below shows the top deductions for the entire Inbound program, specific

to the QAE scorecards. Figure 51 includes all deductions for the entire Inbound program, including deductions captured during grace period critical fails.

*Figure 51. Quality: Top Ten Deductions – Inbound QAE*

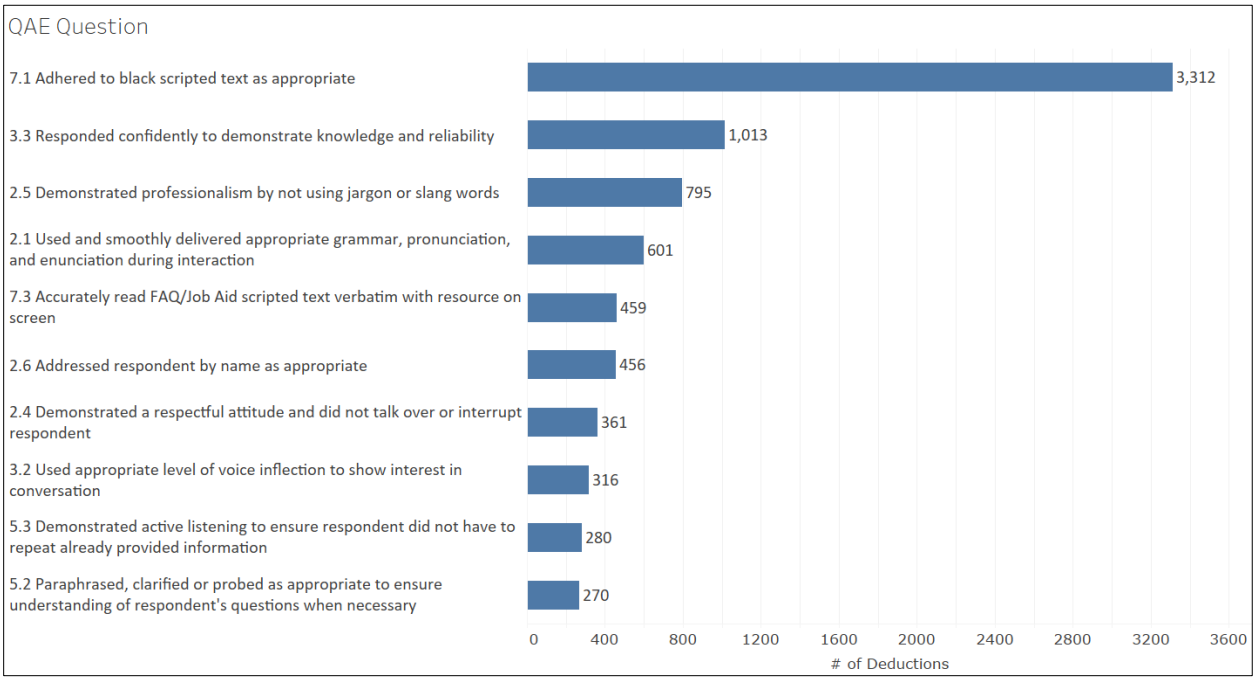



Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Deductions by Section and Question."

The top deduction on the QAE scorecard for the Inbound Program was Section 7.3, "Accurately read FAQ/Job Aid scripted text verbatim with resource on screen," with 5,492 deductions across the entire program.

Figure 52 below shows the top deductions for the entire Outbound program, specific to the QAE scorecards. Figure 52 includes all deductions for the entire Outbound program, including deductions captured during grace period critical fails.

*Figure 52. Quality: Top Ten Deductions – Outbound QAE*




Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Report, "Deductions by Section and Question."

The top deduction on the QAE scorecard for the Outbound Program was Section 7.1, "Adhered to black scripted text as appropriate," with 3,312 deductions across the entire program. During the Outbound CI Interview, the text the CSR was required to read was color-coded. Black text was mandatory and needed to be read verbatim. Blue text was optional. The deduction in Section 7.1 indicates that the CSR did not read the black text or did not read it verbatim.

48. How often was the quality contingency plan implemented at the call centers?

The CQA Quality Management program developed a contingency plan if the Calabrio ONE quality monitoring system went offline (e.g., recording errors for audio and/or screen capture, error while saving a completed quality scorecard, etc.). If the system was down temporarily for less than two hours, the quality monitoring team would set up team meetings and conduct calibration sessions. For expected outages over two hours, QMs would conduct side-by-side (SBS) monitoring with CSRs until the Calabrio ONE monitoring system was restored. SBS monitoring was a quality monitoring session where the QM sat next to a CSR and listened to the live call.

There was no contingency plan executed during CQA operations, as there was no universal outage that impacted the Quality Management program. There was one incident on March 13, 2020, in which Calabrio ONE experienced significant delays because of limited bandwidth and high call volume. As a workaround, the Quality Management team reduced the number of QMs

logged into the system by 50 percent, which improved the latency issues. The QMs who were not logged into Calabrio ONE used this opportunity to perform SBS monitoring in an effort to test the process if the established quality contingency plan had to be implemented in the future.

49. How many CSRs were fired because of failing quality evaluations?

Only 52 CSRs were terminated specifically for achieving poor quality scores and/or critical fails. However, 952 CSRs voluntarily resigned after they received a corrective action notification as part of the Quality Management's Progressive Disciplinary Process. These 952 CSRs left the CQA program at a point between receiving a verbal warning and being terminated.

## 5.4 Other Items

50. What was the total cost of CQA?
    a. What were the costs of the Inbound operation?
    b. What were the costs of the Outbound operation?
    c. What were the costs of the Quality Management program?

The total cost of the 2020 CQA contract implementation is estimated at $784,400,000, with $500,100,000 being attributed to Inbound Operations and $284,300,000 being attributed to Outbound Operations. These costs included:

- All CQA contractor activities needed to complete development, testing, scale-up, and integration of all systems, infrastructure, staff, and associated training material and procedures required for the 2020 CQA operation.
- The integrated operation of staff, technology, infrastructure, and facilities to meet the mission of the CQA operation.
- Services required to secure, maintain, and decommission security accreditation for the CQA operation and its elements.
- The close of the CQA operation and completion of contract close-out.

Cost excluded from these estimates are:

- Other contracts the government initiated for the execution of the CQA operation.
- Government staff associated with the CQA GPMO or any other government staff needed to execute the CQA operation.

Approximately $18,600,000 of the cost is estimated for the development of quality assurance tools and implementation of quality assurance operations with $11,900,000 associated with Inbound Operations and $6,700,000 associated with Outbound Operations.

The cost results presented in this assessment were generated based upon Earned Value Management Reporting and 2020 CQA operation metrics. These figures reflect actual costs through November 2021, with estimates of the final invoice being used for the remainder of the CQA contract.

51. What were the CSR staffing levels during CQA operations?

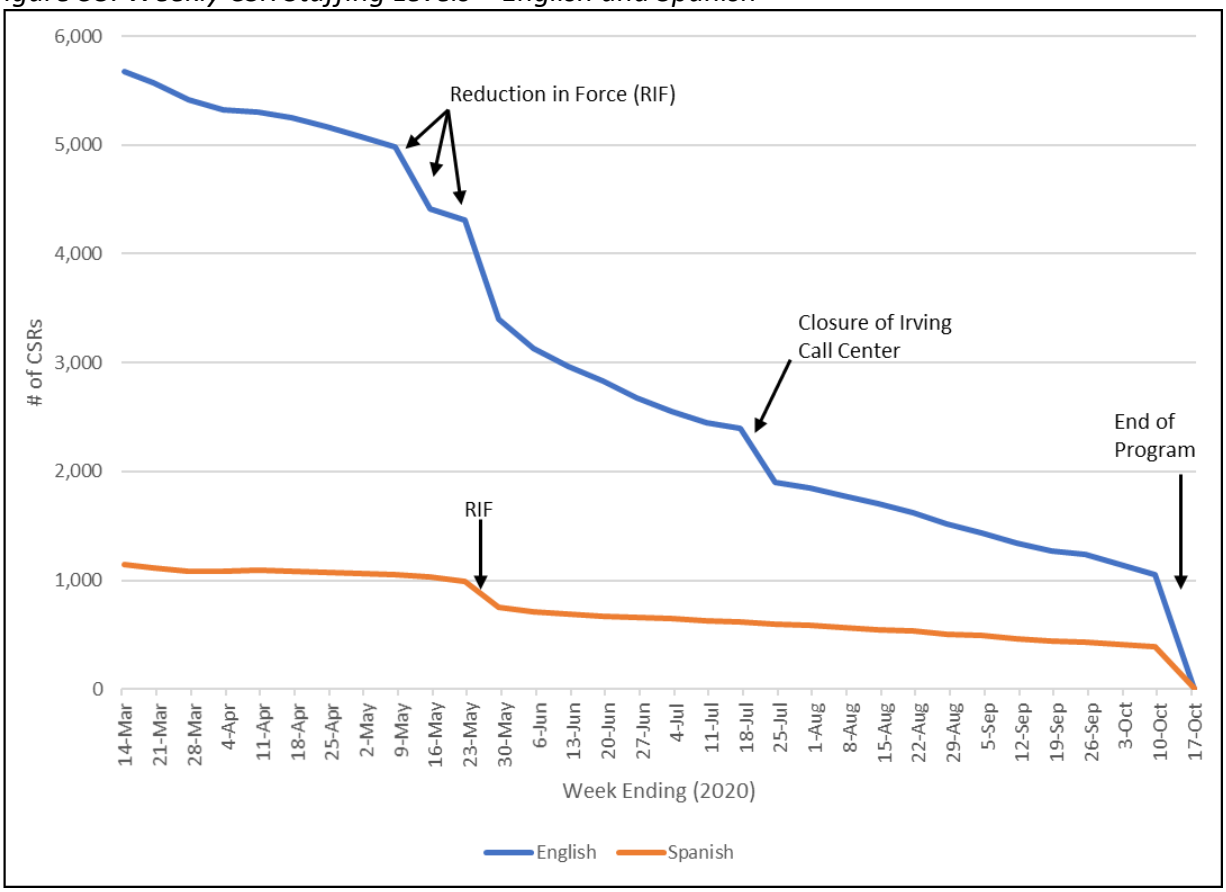
7,303 people were hired and worked as CSRs at some point during CQA operations:

- 5,799 CSRs were skilled in English only.
- 1,151 CSRs were skilled in Spanish and English.
- 353 CSRs were skilled in one of the NENS languages. Originally, CSRs had to pass a language assessment in both the NENS language and English, but the English requirement was deferred in some instances because of the difficulty in hiring CSRs in certain languages.

The peak number of English and Spanish-skilled CSRs occurred at the beginning of CQA, with the week ending March 14, 2020. For the first day of operations, CQA had 5,680 English-skilled CSRs working in nine call centers, which was 104 percent of the initial hiring goal of 5,454 English-skilled CSRs. During this same time, CQA had 1,142 Spanish-skilled CSRs working across five call centers, which was more than 133 percent of the initial hiring goal of 854 Spanish-skilled CSRs.

After the first week of operations, CQA experienced a natural decline in staffing for the English and Spanish-skilled CSRs and planned for reductions in force (RIF). In May 2020, CQA reduced the staffing headcount by 1,451 CSRs across the English and Spanish languages. A second RIF occurred with the planned closure of the English-only Irving call center in late July 2020. The final drop in staffing occurred during the final week of CQA operations. Figure 53. below shows the weekly CSR staffing levels for the English and Spanish languages.

*Figure 53. Weekly CSR Staffing Levels – English and Spanish*




Source: U.S. Census Bureau, 2020 Census, Excel Spreadsheet, "CQA Weekly CSR Headcount Cumulative."

Note that from March 22 to May 16, 2020, CQA operated on a reduced staffing model, where call centers limited physical staffing at the call center by 50 percent and CSRs worked in schedule blocks. CSRs remained on the program even if they were not present at the call centers.

Although CQA exceeded its start of operations hiring goal for English and Spanish-skilled CSRs, hiring CSRs for certain NENS languages was less successful. For example, CQA only reached 26 percent of its initial hiring goal for Japanese support. Table 42 below shows each of the NENS languages and how successful CQA was at initial hiring for those languages.

*Table 42. CSR Staffing: Start of Operations Hiring Goal for NENS Languages*

| Language | # Start Goal | # Actual Start | % of Hiring Goal |
|---|---|---|---|
| Japanese | 23 | 6 | 26.1 |
| Vietnamese | 24 | 8 | 33.3 |
| Korean | 26 | 13 | 50.0 |
| Polish | 21 | 11 | 52.4 |
| Chinese Cantonese | 28 | 25 | 89.3 |
| Tagalog | 17 | 16 | 94.1 |
| Russian | 25 | 25 | 100.0 |
| French | 22 | 26 | 118.2 |
| Chinese Mandarin | 27 | 32 | 118.5 |
| Portuguese | 18 | 24 | 133.3 |
| Arabic | 24 | 32 | 133.3 |
| Haitian Creole | 21 | 31 | 147.6 |

Source: U.S. Census Bureau, 2020 Census, Excel Spreadsheet, "CQA Weekly CSR Headcount Cumulative."

After the start of operations, CQA continued to hire NENS-skilled CSRs well into operations. Because of higher-than-expected call volume, most NENS CSRs working from the New York call center during the height of the COVID-19 pandemic, and social distancing at the call centers, CQA continued to hire NENS CSRs at other CQA call centers. To address the staffing gap, CQA began hiring NENS-skilled CSRs to work from its Washington, D.C.-based Operational Command Center (OCC), as an extension of the New York NENS call center, at the end of April 2020.

52. What was the unplanned CSR attrition rate[26] for CQA?

Of the 7,303 CSRs who worked on the CQA program, employees who were fired or separated on their own (unplanned attrition) accounted for more than 54 percent of all staff leaving the program. However, this figure also includes employees who were aware of an upcoming end date caused by a planned RIF and decided to leave on their own. An additional 2,514 people were given contingent job offers but did not accept a position as a CSR.

*Table 43. CSR Staffing: Reduction in Force and Attrition*

| Reason for Separation | # of CSR Staff | % of CSR Staff |
|---|---|---|
| **Total** | **7,303** | **100.0** |
| Unplanned Attrition (ATT) | 3,958 | 54.2 |
| Reduction in Force (RIF) | 3,345 | 45.8 |

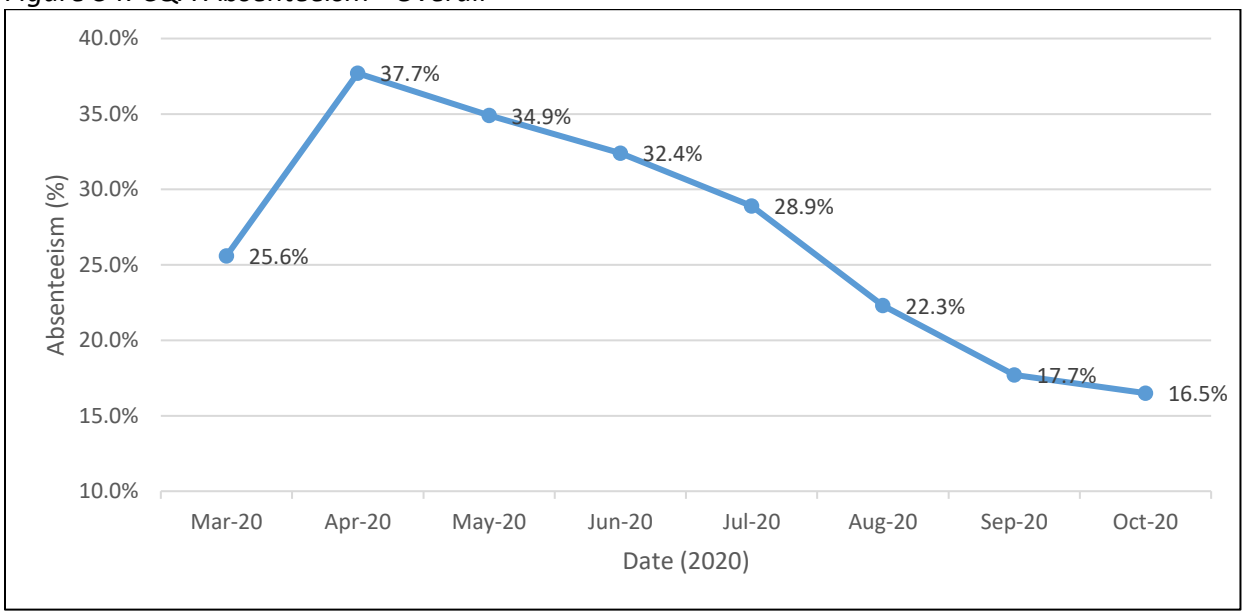
Source: U.S. Census Bureau, 2020 Census, Excel Spreadsheet, "Attrition Report Summary."

[26] Unplanned Attrition Rate - the rate at which CSRs separated from the CQA program that did not occur because of planned reductions in staffing levels.

53. What was the planned vs. actual rate of absenteeism?

Absenteeism is defined as the sum of planned and unplanned time off. Planned time off includes all leave that was known prior to the day of the shift. Unplanned time off is "day of" time off, such as when a CSR calls out the day of their shift, no call no shows, or when a CSR was denied entry to the call center by failing the COVID health check. Prior to the start of operations, a planned target rate of absenteeism was informally set to 7.2 percent. Throughout operations, that target was exceeded, as seen in Figure 54 below.

*Figure 54. CQA Absenteeism - Overall*

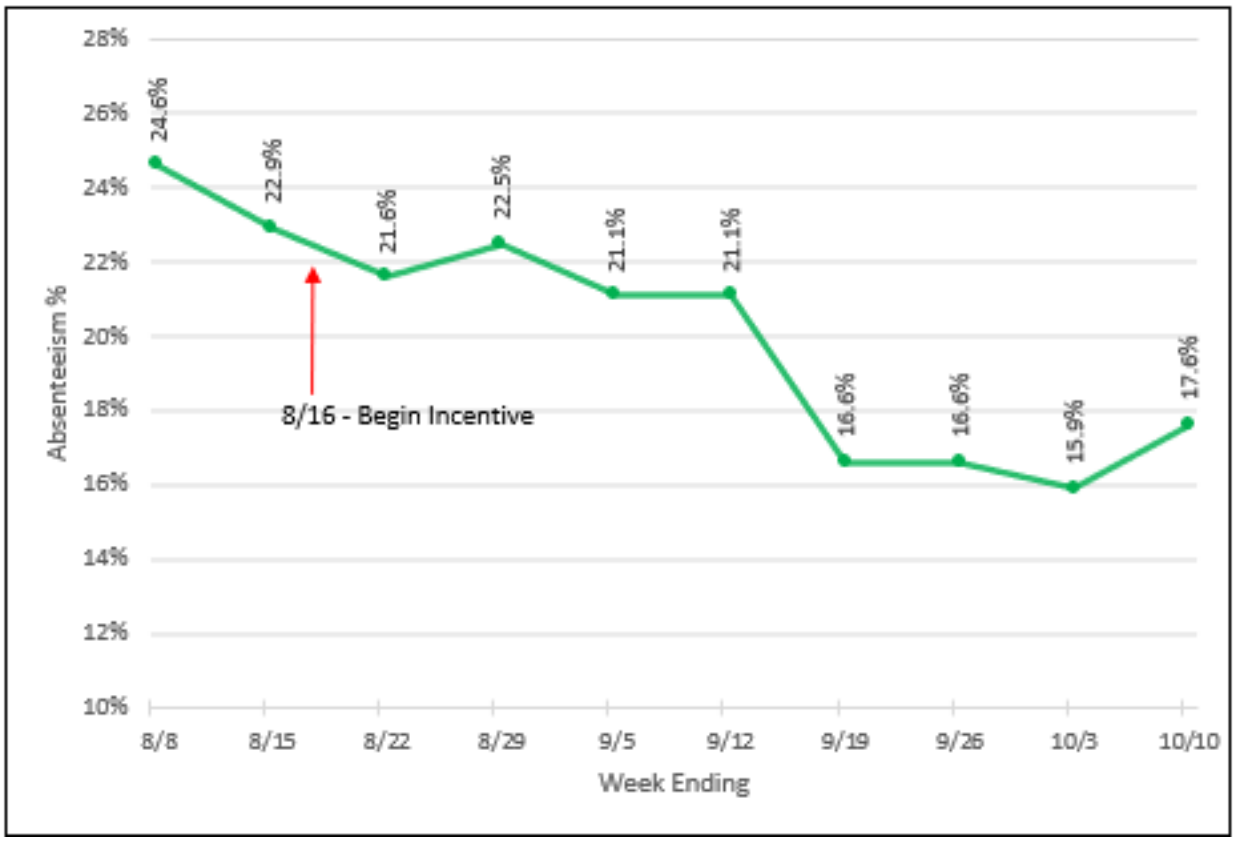



Source: U.S. Census Bureau, 2020 Census, PowerPoint, "CQA Incentive Plan & Performance Overview."

At the beginning of August 2020, an incentive plan was established to increase the staffing capacity in the call centers and help retain staff through the end of the program. The plan required at least 80 percent attendance, as well as adherence[27] of 93 percent or greater. A monetary amount was awarded to CSRs, lead CSRs, and supervisors for each week that the threshold was met, along with a one-time bonus if the threshold was met for a seven-week duration. As seen in Figure 55 below, the rate of absenteeism dropped by 6 percentage points by week five of the incentive plan (week ending on September 19, 2020.)

[27] Adherence – Commitment to schedule. Focused on reducing late to work tardiness, adhering to break and lunch schedules, and returning from training(s) on time.

*Figure 55. CQA Absenteeism – During Incentive*




Source: U.S. Census Bureau, 2020 Census, PowerPoint, "CQA Incentive Plan & Performance Overview."

The incentive plan was projected to cost $2,184,531 for CSRs. The Incentive Plan was also for supervisors and lead CSRs, which was projected to cost $243,820 and $170,406, respectively. The actual cost of the incentive plan for CSRs was $1,030,130, or 52.8 percent less than the planned cost. The actual cost of the incentive plan for supervisors and lead CSRs was $439,950, or 6.2 percent more than the planned cost. In summary, the incentive plan achieved its intended goal and ensured adequate numbers of CSRs were available through the end of operation.

54. What types of technical issues were encountered?

**Calabrio:** The Calabrio quality monitoring system was unstable throughout the 2020 operation. Work arounds and changes to requirements were necessary to deliver the quality monitoring solution. Although there had not been many significant outages, it remained particularly fragile throughout operations and was often down for an hour at a time. While these issues did not adversely affect quality monitoring completion rates, it was an area of concern for the GPMO.

**Jacksonville Power Outage:** On April 8, 2020, around 8 p.m., the Jacksonville call center experienced an outage that caused limited/poor lighting for work and relied on an Uninterruptable Power Supply (UPS) with two to four hours of support for a large facility. The site was shut down and was not opened until after 11 p.m. The UPS died before the decision was made to gradually shut down servers and network infrastructure. UPS test results in 2019 showed recommendations to replace all batteries. The failure to perform recommended UPS maintenance as recommended appears to have caused the UPS power to last less time than expected.

**Kansas City Power Outage:** On March 30, 2020, at 10:30 a.m., the Kansas City call center experienced a power outage caused by the site landlord replacing a control board for the main power supply panel. This broke a fuse and took the entire call center offline. The site power backup is part of the facility and did not perform as expected. The landlord's maintenance was not planned or communicated to anyone on-site. Site facilities need to minimize the chance of a power outage during maintenance activities, coordinate with facilities for advance notice of maintenance activities, and investigate why site backup power failed.

**Single Sign On (SSO) Incident:** On May 1, 2020, at 2:45 p.m., CSRs at multiple sites were experiencing issues with the Single Sign On (SSO) function of the production environment. It was discovered that the certificate used for encryption by the identity provider expired, which caused log on issues at all sites for the entire CSR environment. Calls were continued to be handled by CSRs that remained logged in throughout the incident, but operations were working at diminished capacity until the issue was resolved after 9 p.m. The expiration of this certificate resulted in many CSRs unable to log in and answer respondent calls. The impact on SSO availability resulted in several hours of diminished capacity and diminished confidence in the vendor's capacity to proactively manage certificates expiration. Additionally, this event resulted in more than 6,000 respondent requests for a Scheduled Callback, which put a strain on the Work at Home (W@H) callback operations and was significantly higher than what had been typical since the callback operation began (typically 20 to 40 requests for callback per day) and reduced the likelihood that those respondents requesting callback would be serviced in a timely manner.

**Domain Name System (DNS) Error:** On September 9, 2020, multiple call centers (Blythewood, Jacksonville, Manhattan, Nashville, Tamarac) reported a DNS error on the Agent Desktop, and this caused an error with the DCT tool. It was discovered that call centers located in the eastern U.S. lost DNS routing capabilities because of a circuit outage with CenturyLink. Enumerations at the East Coast call centers were unable to be completed until DNS traffic was rerouted to the West Coast DNS servers. It is estimated that approximately 300 CSRs were impacted during the outage with no dropped calls. CQA worked with the Technical Integrator (TI) to resolve the issue. TI completed the failover to West Coast DNS while the East Coast connection was down. TI Network Operations Center redirected East Coast DNS traffic to the West Coast DNS servers.

55. What was learned during CSR debriefings?

The Census Bureau's Center for Behavior Science Methods (CBSM) conducted CSR debriefings and presented their findings in their 2020 CQA Qualitative Assessment Report. In addition to moderating focus groups, CBSM also developed and distributed a satisfaction questionnaire (feedback exit survey) for the CSRs to report on their experiences. These qualitative assessments covered a wide range of topics, including the DCT, training, FAQs, content translations, technology, and administration. Table 44 below summarizes CSR participation in the assessments.

*Table 44. CBSM Assessments by Call Center*

| Call Center | # of Feedback Exit Survey Participants | Focus Group Participants |
|---|---|---|
| **Total** | **1,867** | **24 focus groups. Total 120 CSRs** |
| Blythewood | 146 | 4 focus groups. Total 12 CSRs – English only |
| Jacksonville | 194 | 2 focus groups. Total 7 CSRs – English, Tagalog, Haitian Creole |
| New York | 88 | 2 focus groups. Total 20 CSRs – English, Japanese, Cantonese, Russian, Vietnamese, Polish, Korean |
| Tamarac | 344 | 2 focus groups. Total 12 CSRs – English, Mandarin, French, Portuguese |
| Irving | 273 | 4 focus groups. Total 12 CSRs – English only |
| Kansas City | 104 | 1 focus group. Total 5 CSRs – English, Arabic, Haitian Creole, Russian, Polish |
| Nashville | 124 | 2 focus groups. Total 10 CSRs – English only |
| El Paso | 267 | 2 focus groups. Total 18 CSRs – English, Spanish stateside, Spanish Puerto Rico |
| Pueblo | 171 | 2 focus groups. Total 12 CSRs – English, Spanish |
| Tempe | 134 | 2 focus groups. Total 12 CSRs – English only |

Source: U.S. Census Bureau, 2020 Census Questionnaire Assistance Qualitative Assessment, Center for Behavioral Science Methods Research and Methodology Directorate.

Key findings directly from the CBSM CQA Assessment are summarized below (Nichols et al., 2021).

- Inbound Data Capture Tool (DCT)
    - 91 percent of CSRs reported a neutral or positive rating that the Inbound DCT was easy to administer.
    - 86 percent of CSRs reported a neutral or positive rating that the Inbound DCT was efficient.
    - 73 percent of CSRs reported a neutral or positive rating that the Inbound DCT flowed smoothly.
    - 54 percent of CSRs disagreed that the Inbound DCT was not repetitive.
- Outbound DCT

  - 83 percent of CSRs reported a neutral or positive rating that the Outbound DCT was easy to administer.
  - 79 percent of CSRs reported a neutral or positive rating that the Outbound DCT was efficient.
  - 75 percent of CSRS reported a neutral or positive rating that the Outbound DCT flowed smoothly.
  - 43 percent of CSRs disagreed that the Outbound DCT was not repetitive.
- Training
  - 92 percent of CSRs reported a neutral or positive rating that the training prepared them to confidently assist respondents.
  - CSRs felt that the training they received was not thorough enough to handle angry callers, or to properly address threats.
  - "CSRs reported feeling that they were not trained enough on how difficult the outbound operation was and how many hang ups there were. CSRs needed more time with the role playing."
  - "CSRs commented that they were not well-trained on field operations."
- FAQs
  - "While the feedback survey results were mixed regarding how efficiently FAQs answer respondents' inquiries, it was clear from the focus groups that the primary issue with the FAQs was that the search algorithm and interface display was inconsistent, which affected the usability of the system."
  - Callers often inquired about the status of their census response. According to CSRs, the FAQ they had to use to answer this question "was not well received."
  - "Most CSRs said that it was difficult to find FAQs quickly. They described how FAQs moved, were removed, and the word that would bring up the FAQ one day would not necessarily bring up the FAQ a different day."
- Languages and Translations
  - CSRs reported problems with the translations in both the exit survey and focus groups.
  - "According to CSRs, many translations seemed to have been created by translating each English word to the other language; in effect, a "word-for-word" translation instead of translating the question or text as a whole entity. Word-for-word translations were problematic because while the sentence structure might be correct for English, the same sentence structure could be incorrect or extremely awkward in another language."
  - CSRs were trained to read every word of the script, otherwise, their quality scores may be impacted. Because of the poor translations, the CSRs would then have to "retranslate the question or sentence on the fly using words and sentence structures they felt were more appropriate. This made for a longer call and some CSRs said their credibility was reduced because callers assumed the CSRs really didn't know the language."
  - The Outbound CI operation only supported English and Spanish languages, and the CSR was unable to transfer a caller between the two. "Based on comments

that the bilingual CSRs made, it seemed like they were not supposed to start speaking the correct language when [a language barrier] happened even if they knew that language. This process issue should be corrected for future operations so that bilingual CSRs can speak in their approved languages, regardless of the language the call started in."

- Technology
  - "In every call center, CSRs described during the focus groups how their system would crash or get very slow during calls. While the system did not crash on every call, some CSRs said that it was a daily occurrence."
  - "During the focus groups, CSRs complained that after a call, there was not enough time to provide feedback for FAQs, provide additional details about the call before it timed out, or code a disposition."
  - "Some CSRs who handled inbound calls and respondent callbacks (normally an outbound component), as well as calls in different languages, expressed some difficulty determining the type of call. They said it was exhausting and challenging to switch gears. A few CSRs suggested a little more cuing on the screen to indicate what type of call was coming in."
  - "CSRs were not allowed any access to the internet while taking calls, but some FAQs reference information on census.gov. CSRs wanted the ability to walk callers through census.gov to find the necessary information, but they could not access the website."
- Administration
  - CSRs had mixed reviews of the Onboarding process, that differed mostly by call center. "At a few of the sites, especially at the beginning of operations, there was a general sentiment that things were hectic." CSRs from other sites reported that the onboarding process was a "great experience."
  - "CSRs at 4 out of 10 of the sites said that there was miscommunication about the start dates and schedules."
  - "Most CSRs agreed that they did not have enough time to keep up with all the emails [during operations]."
  - "There was a mix of responses regarding safety precautions and COVID-19-related communications captured during the focus groups. While all sites used enhanced cleaning protocols, the opinions of how effective they were varied by CSRs. Many CSRs said that the safety precautions were appropriate and met expectations and that the emails about COVID were helpful. At four of the sites, however, CSRs said that they were unsure of the cleanliness of stations and they were lacking products to clean them."
  - "Results were mixed on whether CSRs actually used virtual floor support, and if they did, how effective and efficient that support was for them."
  - 55 percent of CSRs disagreed that virtual floor support should be used instead of in-person support for the next census.
  - "Some CSRs raised issues about the coaching and feedback. Very few CSRs reported receiving positive feedback about calls; almost all CSRs said they only

received feedback on failed calls. There were CSRs at almost all sites who never received any coaching at all, even if they received a critical fail."

56. What were some high-level lessons learned?

**Multiple Mailings with Different IDs**

CQA received many calls from callers who said they received multiple identical mailers with different Census IDs at the same address. In documented situations, there were slight differences in the address spelling, such as "123 Brier Brook Rd." and "123 Briar Brook Rd.," or differences in formatting, such as one mailer addressed with the five-digit ZIP Code, and the other addressed with the ZIP+4 Code format. In these instances, respondents did not know which survey invitation to respond to. Additionally, since CQA had no way of resolving the issue with Census Bureau addresses on file, respondents would continue to receive reminder letters to respond at the duplicate address, possibly resulting in a NRFU visit.

CQA needs an improved way to handle multiple mailings with different Census IDs to the same housing unit. There was no way to collect every instance of this occurring and sending the information to the Census Bureau to update the Master Address File (MAF). CQA will have to work with stakeholders to create an improved Census Bureau strategy for dealing with these situations experienced in 2020.

**Integration with Communications**

2020 Census advertising and partnership events often resulted in unanticipated call volume to CQA. Without an informed understanding of when and where the outreach events were occurring, at times CQA was unprepared for the types of questions that callers asked. An example would be a third-party calling campaign to a specific geographic area about needing to respond to the 2020 Census, when in fact the person receiving the call already responded. Unless CQA was aware of this plan, CSRs could not answer questions about the outreach effort the respondent called CQA about.

CQA needs a better understanding of what the public is seeing or hearing so the CQA operations team could prepare CSRs for the types of calls they might receive. There should be tighter integration with the communications area to understand planned advertising or partnership surges, including details on the type of promotion (e.g., TV commercials). This will improve CQA's preparedness and improve customer service.

**Inability to Provide Questionnaire Status**

CQA was unable to provide information to callers who wanted to know whether the Census Bureau received their completed census responses. To help callers with this, CQA would need to ensure that the person who was calling resided in the household they were calling about, and CQA had no way of doing that. The inability to check whether a questionnaire was received

frustrated callers, who otherwise had no way to check this on their own through the 2020 Census website.

Some frustrated callers completed their questionnaires again over the phone, which caused concerns that their census responses would be counted twice. Going forward, CQA needs to have a method to allow CSRs to provide information to callers on the status of their response. At the very least, callers should be able to check on their completion status by utilizing a self-service option, such as a solution built into the IVR or on the 2020 Census website.

**Involvement in the Development of the CQA-Internet Self Response (ISR) Instrument**

Representatives of the CQA team need to be involved with the development of the CQA-ISR and CI data collection instruments. The CQA instrument needs a clear operational owner that can ensure that instrument development matches the specifications. Additionally, a future CQA instrument should be developed separately from an ISR instrument that would allow the specifications to include more adaptations for the phone response mode. CQA, Content and Forms Design (CFD), and Language Services (LNG) should consider sponsoring additional pretesting, which could include usability testing as well as other approaches (cognitive interviews, focus groups, etc.). Key stakeholders for the data collection instrument being used by CQA need to be identified and involved sooner in the decennial life cycle process.

**Scheduled Callback Functionality**

Although the CQA contractor was able to stand up the Scheduled Callback solution quickly to improve the customer experience during production, it should have been part of the backup plan to begin with. The original callback option was ASAP Callback, which acted as a virtual queue for callers who did not want to remain on hold during periods of high call volume. However, the ASAP Callback functionality did not perform as anticipated during peak weeks because of a combination of high call volume and lower than anticipated staff taking calls because of COVID-19. Additionally, ASAP Callback was established only for the English and Spanish language TFNs, and low staffing in the NENS languages caused excessive wait times for callers on the NENS TFNs. Because of its success as an ad hoc backup plan in 2020, a Scheduled Callback solution should be a standard option during periods of high call volume in a future CQA program.

**Uploading Knowledge Articles Quickly**

The CQA Knowledge Management Content Management Board was an organized effort by CQA, Content and Forms Design (CFD), Language Services (LNG), and Decennial Translations Branch (DTB) to discuss updates to existing FAQ content and proposals for new knowledge articles based on changing program needs. After the content was approved by the Census Bureau, the knowledge articles were uploaded and made available to the CSRs quickly—typically within an hour of receiving approval. The result of this quick action was that CSRs had the most current information in their knowledge library when callers asked questions. This was especially important in time-sensitive matters, such as falsehoods circulating online

about households receiving government stimulus checks being dependent on completing the 2020 Census questionnaire. In a future CQA operation, the program should continue to have a way to quickly update knowledge articles after they are approved so that CSRs have the most current information to provide callers as soon as it is available.

**Census Bureau Training – Overview**

The amount of time devoted to an overview of the Census Bureau in training was insufficient. CSRs were only briefly trained on other business the Census Bureau does aside from the decennial census, and CSRs came across as unknowledgeable, at times providing incorrect information to respondents. An example was respondents calling CQA at the beginning of operations stating that they already completed the census recently, which was most likely the American Community Survey (ACS). When asked for their 12-digit Census ID, respondents told CSRs they had a 10-digit ID instead. CSRs were confused about the discrepancy and did not understand that the respondent may be calling about another survey. Respondents in other survey samples, such as the Current Population Survey (CPS), called about household visits well before NRFU began, and CSRs did not know about other Census Bureau surveys that made household visits.

Eventually, an electronic version of the ACS questionnaire was made available to CSRs, which they found to be helpful in determining if the respondent was calling about the wrong survey. CSRs would have liked digital images of other Census Bureau surveys to help identify the materials respondents received (especially those surveys conducted concurrently with the 2020 Census) and provide the correct contact number.

Training should include more focus on what the Census Bureau is and does (such as work performed in other directorates), what the different operations of the decennial census are, and where CQA fits into the big picture. Additionally, electronic versions of other Census Bureau surveys and mailings should be made available to CSRs.

**Physical Call Centers**

The fundamental premise of the contract was the CQA operation had to be performed inside a physical call center, where CSR activities could be monitored, data could be secured, and the government could observe the operation. The method of performing work in a physical call centers is costly and inflexible when program parameters need to change.

Because of the need to implement a reduced staffing model in response to the COVID-19 pandemic, the CQA team worked with Census Bureau Security to develop a Work at Home (W@H) operation for CSRs to respond to Scheduled Callbacks from their homes. In a future CQA operation, consider reducing or eliminating physical call centers and allow CSRs to work from home. This should be an option for both the inbound and outbound calling operations.

57. What would the Integrated Project Team (IPT) change about the implementation of the 2020 Census CQA operation?

The challenges that CQA faced resulting from COVID-19 were numerous, but the one with the greatest effect on the program was the need to create a safe working environment for CSRs by adhering to social distancing guidelines. Beginning in late March 2020 and lasting through the end of operations, CQA implemented social distancing at the call centers to ensure the safety of CQA staff. CQA operated on a reduced staffing model for the first two months of operations, which was especially challenging since it coincided with when CQA received the highest call volume and had the least number of CSRs available to answer calls. During this time, individual CSRs worked in the call center for two weeks, then stayed at home for two weeks, on a rotating basis. CSRs were paid to stay at home so CQA could maintain steady staffing levels. CQA implemented the W@H solution to allow CSRs to return Scheduled Callbacks and complete enumerations from their homes. The W@H model was a temporary fix that worked well. One consideration CQA would have made was to revisit the security needs of having a controlled environment to receive calls and complete enumerations, and reengineer the program to allow CSRs to work from home. The costs associated with the leasing, buildout, maintenance, utility, and security of the call center would be greatly reduced if CSRs were able to perform their job duties at home.

As addressed earlier, CQA had various challenges with meeting its CSR hiring goals for several of the NENS languages. Initially, the CQA contractor planned to hire all NENS-skilled CSRs at one centralized call center, which was in midtown Manhattan in New York City. Most NENS CSRs hired at the New York call center had lengthy commutes. Further, New York City was the epicenter of the COVID-19 pandemic at the height of CQA operations, which limited the work availability of NENS staff. In hindsight, CQA would have allowed NENS-skilled CSRs to be hired at any call center location or to work remotely from home.

CQA also would have pushed to develop an improved communications channel with the Census Bureau's Field Division (FLD) to allow for quicker communication regarding threat calls against field staff. Additionally, CQA would have liked a better process for FLD to receive and address specific complaints about enumerator actions and behaviors. CQA was not initially prepared to deal with the volume of threat calls that came to the call centers because of the NRFU operation, and CSRs were not adequately trained on how to deal with them.

58. What major challenges does the IPT foresee affecting the implementation of the CQA operation in the future?

- One of the biggest challenges to CQA in the future will keeping up with changing technology and threats to privacy (e.g., video calls, denial-of-service [DOS] attacks, or other attack vectors).
- It is also possible that changes to laws, such as the Telephone Consumer Protection Act (TCPA), may place greater restrictions on autodialing for outbound calls.

- CQA will have to ensure the service it provides meets the needs of the demographics that call. As the U.S. population ages, CQA must match its business tools with customer technology demands.
- Balancing new technology with security will also be a challenge for the 2030 Census. As there is a general shift toward more cloud-based technology, customer data will be hosted in more decentralized locations or data centers but may lack Federal Risk and Authorization Management Program (FedRAMP) Authority to Operate (ATO).
- More advanced IVR technology converging with data collection may be a possibility in 2030. If this is a combination of modular technology combined into a solution, a timely ATO can be challenging.

CQA operations will be challenged by the impact of the census mailing strategy. Specifically, the fact that CQA will be challenged to determine the right level of staffing to handle peak call volumes while also factoring in cost. While some work was done leading up to the 2020 Census to spread out the in-home dates for mailing materials, CQA still struggled on how best to handle call volume, especially early on in operations.

The following section will discuss how the results of this operational assessment contributed to the overall success of the CQA program, as well as recommendations that should be considered in preparing for the next decennial census.

# 6. Conclusions and Recommendations

The overall goals of the CQA program were to provide questionnaire assistance to respondents by answering questions about specific items on the census form or other FAQs about the 2020 Census, or to complete the census for respondents over the phone. Additionally, CQA was to conduct an Outbound CI operation to verify or clarify respondent information submitted on the census questionnaire. To ensure customer service representatives (CSRs) were capturing data accurately and providing acceptable customer service, CQA established a Quality Management program. The following sections make conclusions about the success of the CQA program in achieving these goals, as well as provide recommendations for the implementation of the CQA program in support of the 2030 Census.

## 6.1 Conclusions

The COVID-19 pandemic forced CQA to make several adjustments as part of its pandemic contingency plan, including reducing physical staffing at the call centers to 50 percent. Reduced staffing combined with high call volume led to more IVR deflections for English and Spanish, but also higher overall call volume since many of those respondents called back. This was evident by the high percentage of repeat callers (nearly 28 percent) on high call volume days while the reduced staffing model was in place. At the beginning of operations, staffing for some NENS languages was below the hiring target. Most NENS CSRs worked at the New York City call

center, which was the epicenter of the COVID-19 pandemic in the beginning of operations. The pandemic caused high absenteeism rates among NENS CSRs, which caused higher than anticipated wait times for callers, and ultimately higher call abandonment rates.

CQA quickly implemented system and procedural changes to improve the caller experience when call volume was high and staffing was reduced, such as developing a Scheduled Callback capability for all languages, and a solution for CSRs to make callbacks to respondents from home. CSRs made more than 53,000 Scheduled Callbacks to respondents across all CQA-supported languages, with more than 36 percent of them dispositioned as enumerations. CQA also began hiring for the understaffed NENS languages out of the Operational Command Center (OCC) in Washington, D.C., to serve as an extension to the New York call center's NENS operation.

Despite the numerous challenges the COVID-19 pandemic presented, CQA maintained operations every day and maintained 100 percent uptime for all critical systems, received nearly 13.5 million inbound calls across 13 languages, handled more than 4.7 million inbound calls with live CSRs, with more than half of all calls dispositioned as enumerations. CQA achieved its contractual SLA of answering 80 percent of calls within 30 seconds (measured weekly) in all but the first four weeks of the operation, which was when CQA experienced the highest levels of call volume while operating with 50 percent of planned staffing.

The Outbound CI operation was considered a success. The total amount of completed cases exceeded the target by 4.8 percentage points. In addition, CQA was able to attempt an additional half a million CI cases above the original plan without additional cost.

The Quality Management program achieved its contractual SLA goal of 97 percent adherence to the CSR quality standards for both data capture and customer service.

The Census Bureau announced numerous schedule changes during the 2020 Census. CQA successfully adapted by adjusting staffing levels appropriately as the mailing strategy and targeted operational end dates changed. Based on the 2010 Census and previous census tests, CQA developed detailed call and staffing models to determine the number of call centers and the appropriate number of staff to support meeting the service levels required in the agreement with the contractor. CQA was able to hire a CSR workforce of more than 7,300 CSRs to maintain operations, despite high absenteeism rates because of the pandemic. CSR absenteeism levels spiked after the COVID-19 pandemic began, far above the 7 percent planned absenteeism rates predicted in CQA's staffing model. CQA put a plan into effect that reduced absenteeism at the call centers by implementing attendance incentives.

CQA was able to stay within its final approved budget, however, CQA requested additional funding to pay for expenses at the call centers related to COVID-19. Since the contract type was a cost-plus award fee, considerable importance was placed on budget management and spending forecasting, given known spending limits on the CQA program's budget allocations. Controlling the scope, schedule, and budget required a rigorous change management process

for each proposed change to ensure accurate and documented analyses and data-driven decision-making. CQA produced its data files and management reports daily, all critical milestones were met, and decommissioning efforts were concluded ahead of schedule.

Despite the successes the CQA operation achieved in meeting program goals in support of the 2020 Census, the next section identifies several recommendations that should be considered in the planning of the 2030 Census.

## 6.2 Recommendations

1. **Consider the need for physical call centers for the 2030 Census.**

The fundamental premise of the contract was the CQA operation had to be performed inside a physical call center, where CSR activities could be monitored in person, access to data could be secured via physical measures, and the government could observe the operation. The method of performing work in this manner is costly and inflexible when program parameters need to change.

Because of the need to implement a reduced staffing model in response to the COVID-19 pandemic, the contractor developed a Work at Home (W@H) operation for CSRs to respond to Scheduled Callbacks from their homes. In a future CQA operation, consider reducing or eliminating physical call centers and allow CSRs to work from home. This should be an option for both the Inbound and Outbound operations.

2. **CQA needs to be more involved in the CQA-ISR instrument development.**

Representatives of the CQA team need to be involved with the development of the CQA-ISR and CI data collection instruments. The CQA instrument needs a clear operational owner that can ensure that instrument development matches the specifications. Additionally, a future CQA instrument should be developed separately from an ISR instrument, which would allow the specifications to include more adaptations for the phone response mode. CQA, Content and Forms Design (CFD), and Language Services (LNG) should consider sponsoring additional pretesting, which could include usability testing as well as other approaches (cognitive interviews, focus groups, etc.). Key stakeholders for the data collection instrument being used by CQA need to be identified and involved sooner in the decennial life cycle process.

3. **Consider newer technologies for TTY that will assist respondents in both the hearing impaired and hearing populations.**

Since TTY calls are infrequent and extremely low volume, an alternative real-time chat solution would more efficiently use CSRs, better integrate reporting and metrics into the Workforce Management solution, and enhance customer experience associated with TTY calls. If chat was offered as an additional channel to the public for enumeration, it would allow CSRs to take TTY calls through chat as well as other types of calls. CSRs would no longer need to be individually skilled in TTY. This was required in 2020 because CSRs were required to work at a separate

workstation with TTY software installed to communicate with the caller. A chat solution enabling CSRs to service TTY and other calls (without having to be dedicated to TTY only) would increase CSR efficiency and use.

4. **The ability for CSRs or respondents to check the completion status of the census questionnaire is necessary.**

In 2020, there were no means for respondents or CSRs to check whether the Census Bureau received completed questionnaires after they were submitted. A lengthy confirmation number was available to respondents who completed their questionnaires online or over the phone with CSRs, but there was no use of that confirmation number for verification purposes. With most respondents completing their questionnaires online and other Census Bureau surveys such as the American Community Survey (ACS) being conducted concurrently with the decennial census, CQA needs to have a method of allowing CSRs to provide information to callers on the status of their responses. Ideally, callers could check on their completion status by utilizing a self-service option, such as a solution built into the IVR, or on the decennial census website. Some current Census Bureau surveys, such as the ACS, already utilize this functionality allowing callers to check on the status of their questionnaires.

5. **Decisions about the formatting, length, or sequencing of the Census ID should be made early so they could be properly tested across all technologies.**

CQA faced multiple challenges with collecting the Census ID in both the IVR and during a CSR-administered enumeration. The Census Bureau implemented a change from a 12-digit numeric ID to a 12-character alphanumeric ID, and that change caused issues. The Census ID, which was printed on mailing materials, had many similar items (i.e., many numbers and/or characters sounded the same [e.g., “d,” “p,” etc.]). Additionally, some letters and numbers looked the same to humans (e.g., “Z” and “2”). CSRs also struggled with entering the Census ID correctly, asking callers to repeat it, often several times, which increased the average handle time. Because of these issues, CSRs had to occasionally enumerate using the non-ID path even if the caller had a Census ID.

When considering the alphanumeric makeup of the Census ID, letters and numbers that sound the same (letters C, D, G, P, T, V, Z, and number 3) should be avoided. To the extent possible, have a predictable pattern if using alpha characters. CSR recognition rates could be improved if the alpha characters were limited to only specific positions rather than anywhere within the 12 characters.

6. **Consider government contractor liability regarding any automatic outbound dialing.**

In December 2020, the Federal Communications Commission (FCC) ruled that government contractors must have consumers’ prior consent before making robocalls to them. The ruling does not apply to federal government employees. When preparing for the 2030 Census, the Census Bureau will need to determine how best to conduct CI. The 2020 Census method of using government contractors to perform automatic outbound dialing will not be protected under the Telephone Consumer Protection Act (TCPA), considering the December 2020 ruling by the FCC. If the 2030 Census approach is to use government contractors for the Outbound CI

operation, the Census Bureau should consider the potential liability of the government contractor for alleged TCPA violations.

7. **Dual skilling CSRs should be considered as a best practice.**

The priorities of the Inbound and Outbound programs influenced staffing. During 2020, when Inbound call volume was high, Outbound CSRs were reskilled to handle inbound calls, significantly impacting the number of outbound dials on these days and potentially reducing the number of completed cases for the Outbound operation. Determining the importance of the operations will determine the metrics for which the contractor will be accountable and how staffing will be handled. A blended workforce, where CSRs are trained in both Inbound and Outbound, is the most efficient. However, consideration should be given to the different skill sets needed for the two operations. The Outbound CI operation had a strong focus on overcoming reluctant respondents and navigating aggressive and nonaggressive refusals. In 2020, not all CSRs were well suited to handle outbound calls. It is recommended and feasible to multiskill CSRs for efficiency through targeted recruitment and training. Consideration could be given to targeting candidates that have the necessary skills for both operations and who can transition effectively between the two skills. It is suggested that a portion of CSRs should be allocated to only one operation, hence saving time on training, and focusing on maturing their unique call handling skills over time.

## 7. Review / Approval Table

The individuals or groups that appear in the table below have reviewed and approved this operational assessment report.

| Role | Approval Date |
|---|---|
| Decennial Census Management Division (DCMD) ADC for CQA | 03/15/2021 |
| Decennial Research Objectives and Methods (DROM) Working Group | 11/22/2021 |
| Decennial Communications Coordination Office (DCCO) | 02/06/2023 |

## 8. Document Revision and Version Control History

The table below includes entries for each major version of this operational assessment report along with a brief description of the version and/or any changes made to the preceding version.

| Version/Editor | Date | Version Description/Revisions |
|---|---|---|
| 1.0/Bernstein | 02/06/2023 | Final Version Approved for Public |

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# Appendix A: Glossary of Acronyms

| Acronym | Definition |
|---|---|
| ACD | Automated Call Distribution |
| ACS | American Community Survey |
| ACW | After Call Work |
| AHT | Average Handle Time |
| AOO | Area of Opportunity |
| ASA | Average Speed to Answer |
| ASAP | As Soon As Possible |
| ATO | Authority to Operate |
| AWT | Average Wait Time |
| CBSM | Center for Behavioral and Survey Methodology |
| CDC | Centers for Disease Control |
| CDL | Census Data Lake |
| CFU | Coverage Followup |
| CI | Coverage Improvement |
| CQA | Census Questionnaire Assistance |
| CSR | Customer Service Representative |
| DBR | Daily Briefing Report |
| DCCO | Decennial Communications Coordination Office |
| DCEO | Decennial Contracts Execution Office |
| DCMD | Decennial Census Management Division |
| DCT | Data Capture Tool |
| DNC | Do Not Call |
| DOP | Detailed Operational Plan |
| DOS | Denial-of-service |
| DQA | Data Quality Audit |
| DRF | Decennial Response File |
| DROM | Decennial Research Objectives and Methods Working Group |
| DSSD | Decennial Statistical Studies Division |
| E2E CT | End-to-End Census Test |
| ECaSE | Enterprise Censuses and Survey Enabling |
| ET | Eastern Time |
| EWT | Estimated Wait Time |
| FAQ | Frequently Asked Question |
| FedRAMP | Federal Risk and Authorization Management Program |
| FLD | Field Division |
| GPMO | Government Program Management Office |

| | |
|---|---|
| GQ | Group Quarters |
| HCD | High Count Discrepancy |
| IPT | Integrated Project Team |
| ISR | Internet Self-Response |
| IVR | Interactive Voice Response |
| LCD | Low Count Discrepancy |
| LCM | List and Campaign Manager |
| MRS | Management Reporting System |
| MT | Mountain Time |
| MQA | Mobile Questionnaire Assistance |
| NCT | National Census Test |
| NENS | Non-English/Non-Spanish |
| NOV | Notice of Visit |
| NRFU | Nonresponse Followup |
| NRFU RI | Nonresponse Followup Reinterview |
| NRFU-QC | Nonresponse Followup Quality Control |
| OC | Overcount |
| QAE | Quality Evaluation |
| QM | Quality Monitor |
| RA | Remote Alaska |
| SBS | Side-by-Side |
| SLA | Service Level Agreement |
| SOCS | Survey Operational Control System |
| TCPA | Telephone Consumer Protection Act |
| TDD | Telecommunication Device for the Deaf |
| TFN | Toll-Free Number |
| TI | Technical Integrator |
| TQA | Telephone Questionnaire Assistance |
| TTY | Teletypewriter |
| UC | Undercount |
| UE | Update Enumerate |
| UL | Update Leave |
| UPS | Uninterrupted Power Supply |
| VFS | Virtual Floor Support |
| WFM | Work Force Management |
| W@H | Work @ Home |

# Appendix B: Additional Figures and Tables

*Figure 56. Percentage of Calls Answered within 30 Seconds, by Week and Language.*

| Week Ending | TOT | ENG | SPAN | MAN | CAN | VIET | KOR | RUS | ARA | TAG | POL | FRE | HC | POR | JPN | TTY | GQ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-Mar | **77.0** | 78.7 | 90.8 | 46.0 | 39.3 | 4.2 | 13.1 | 35.1 | 43.6 | 21.6 | 18.6 | 63.0 | 50.6 | 47.8 | 10.9 | 53.1 | N/A |
| 21-Mar | **73.5** | 73.9 | 97.1 | 31.1 | 25.4 | 2.4 | 7.4 | 41.0 | 34.9 | 50.5 | 29.7 | 54.3 | 67.6 | 64.0 | 31.0 | 55.5 | N/A |
| 28-Mar | **28.3** | 24.8 | 76.5 | 14.5 | 6.4 | 5.6 | 2.5 | 36.6 | 31.9 | 36.8 | 19.9 | 37.8 | 47.6 | 57.1 | 32.1 | 49.7 | N/A |
| 4-Apr | **7.6** | 6.7 | 12.2 | 34.2 | 6.1 | 7.8 | 1.2 | 74.4 | 66.8 | 38.1 | 20.1 | 80.2 | 58.0 | 81.9 | 54.9 | 69.5 | 11.0 |
| 11-Apr | **85.1** | 86.3 | 81.7 | 97.7 | 56.7 | 22.4 | 28.0 | 91.2 | 100.0 | 89.1 | 83.3 | 100.0 | 94.2 | 99.0 | 71.3 | 69.7 | 46.8 |
| 18-Apr | **92.5** | 93.1 | 92.8 | 97.4 | 47.3 | 42.1 | 44.8 | 99.7 | 99.0 | 99.0 | 44.9 | 100.0 | 100.0 | 100.0 | 87.5 | 91.8 | 77.2 |
| 25-Apr | **99.2** | 99.9 | 98.9 | 98.9 | 30.8 | 72.0 | 82.9 | 100.0 | 99.5 | 95.6 | 77.7 | 100.0 | 100.0 | 100.0 | 97.3 | 91.7 | 99.0 |
| 2-May | **97.2** | 97.4 | 97.7 | 93.4 | 50.2 | 85.4 | 90.9 | 95.0 | 93.6 | 96.6 | 97.5 | 96.4 | 91.1 | 91.3 | 100.0 | 96.0 | 91.9 |
| 9-May | **96.0** | 96.4 | 94.3 | 90.7 | 47.9 | 88.5 | 95.7 | 83.5 | 92.6 | 98.5 | 100.0 | 100.0 | 91.5 | 89.4 | 95.9 | 98.2 | 82.2 |
| 16-May | **99.8** | 100.0 | 100.0 | 100.0 | 66.8 | 100.0 | 97.4 | 100.0 | 100.0 | 94.1 | 93.5 | 100.0 | 100.0 | 100.0 | 100.0 | 97.4 | 85.4 |
| 23-May | **99.7** | 100.0 | 98.4 | 100.0 | 86.9 | 100.0 | 100.0 | 100.0 | 97.8 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 97.0 | 100.0 |
| 30-May | **98.8** | 99.9 | 93.8 | 100.0 | 99.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 95.9 | 84.5 |
| 6-Jun | **97.3** | 98.3 | 91.8 | 100.0 | 100.0 | 100.0 | 98.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 95.8 | 89.3 |
| 13-Jun | **98.7** | 99.2 | 94.1 | 98.9 | 100.0 | 100.0 | 98.1 | 91.3 | 100.0 | 84.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 94.6 |
| 20-Jun | **99.3** | 99.9 | 95.6 | 100.0 | 100.0 | 100.0 | 100.0 | 98.4 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 89.0 |
| 27-Jun | **99.7** | 100.0 | 97.7 | 100.0 | 100.0 | 100.0 | 97.5 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 98.3 | 97.2 |
| 4-Jul | **96.7** | 99.9 | 80.6 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 97.3 |
| 11-Jul | **98.5** | 99.8 | 93.8 | 98.5 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 96.4 | 91.2 |
| 18-Jul | **97.5** | 98.0 | 94.5 | 100.0 | 100.0 | 100.0 | 97.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 95.8 |
| 25-Jul | **94.7** | 83.5 | 90.3 | 86.4 | 93.8 | 95.1 | 100.0 | 73.0 | 91.4 | 59.5 | 100.0 | 72.7 | 96.8 | 87.5 | 100.0 | 98.9 | 99.2 |
| 1-Aug | **93.2** | 93.6 | 90.2 | 94.0 | 80.5 | 97.2 | 84.6 | 85.5 | 78.1 | 94.7 | 88.5 | 89.5 | 94.3 | 79.3 | 100.0 | 97.5 | 95.3 |
| 8-Aug | **95.0** | 95.4 | 92.3 | 86.7 | 85.9 | 91.3 | 84.0 | 83.3 | 89.5 | 75.0 | 78.3 | 90.9 | 89.5 | 89.7 | 100.0 | 94.1 | 89.5 |
| 15-Aug | **97.1** | 97.2 | 96.5 | 94.0 | 90.9 | 94.2 | 87.0 | 92.9 | 96.2 | 93.5 | 91.1 | 100.0 | 97.8 | 92.1 | 100.0 | 95.9 | 95.1 |
| 22-Aug | **91.7** | 91.7 | 92.9 | 68.4 | 82.4 | 91.1 | 82.3 | 73.1 | 79.5 | 40.0 | 66.0 | 91.3 | 84.9 | 73.0 | 100.0 | 95.3 | 84.6 |
| 29-Aug | **87.6** | 87.3 | 91.9 | 82.3 | 82.5 | 90.0 | 84.3 | 91.1 | 92.2 | 78.6 | 76.6 | 92.0 | 93.0 | 81.7 | 100.0 | 94.6 | 77.6 |
| 5-Sep | **95.6** | 95.8 | 93.9 | 83.0 | 85.1 | 89.1 | 79.8 | 82.6 | 78.8 | 51.3 | 79.5 | 81.8 | 87.5 | 85.7 | 100.0 | 97.7 | 87.5 |
| 12-Sep | **93.4** | 93.4 | 94.0 | 79.5 | 84.4 | 87.9 | 87.3 | 81.4 | 71.0 | 67.7 | 53.7 | 96.2 | 84.3 | 69.6 | 100.0 | 98.4 | 79.7 |
| 19-Sep | **97.1** | 97.3 | 95.3 | 87.8 | 90.4 | 85.6 | 91.7 | 87.6 | 87.5 | 69.7 | 78.6 | 82.4 | 91.1 | 84.9 | 100.0 | 98.7 | 94.4 |
| 26-Sep | **97.1** | 97.4 | 96.2 | 78.8 | 84.1 | 76.0 | 88.5 | 74.7 | 87.5 | 55.9 | 71.4 | 75.0 | 85.6 | 78.4 | 94.7 | 98.6 | 85.7 |
| 3-Oct | **93.1** | 92.9 | 95.9 | 84.4 | 76.8 | 73.6 | 88.7 | 84.2 | 73.3 | 56.8 | 80.0 | 100.0 | 86.7 | 83.7 | 100.0 | 99.0 | 85.7 |
| 10-Oct | **100.0** | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 97.1 | 91.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 17-Oct | **92.1** | 93.8 | 81.1 | 81.3 | 98.2 | 82.8 | 90.6 | 86.7 | 84.6 | 70.0 | 83.3 | 100.0 | 100.0 | 92.0 | 100.0 | 100.0 | 89.5 |

| | | | | |
|---|---|---|---|---|
| TOT : Total | CAN : Chinese - Cantonese | ARA : Arabic | HC : Haitian Creole | GQ : Group Quarters |
| ENG : English | VIET : Vietnamese | TAG : Tagalog | POR : Portuguese | |
| SPAN : Spanish | KOR : Korean | POL : Polish | JPN : Japanese | |
| MAN : Chinese- Mandarin | RUS : Russian | FRE : French | TTY : TTY | |

Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, "Inbound Intraday Reporting: Inbound Call Volume Detail - Intraday".

## Appendix C: ACD Broadcast Messaging

| ACD Messaging | | | |
|---|---|---|---|
| **Location of Hang Up** | **Text Heard by Caller** | | **% of All Deflections** |
| **Greeting** | Thank you for calling the 2020 Census questionnaire assistance line. In order to help protect the health and safety of our employees we will have fewer representatives at our call centers. Please bear with us as this may result in difficulty reaching a representative or longer than expected wait times. Your response to the 2020 Census is important and we will take your call as soon as possible. | | **10.9%** |
| **High Call Volume** | <IF HIGH CALL VOLUME> We are currently experiencing extremely high call volumes and wait times. If you are calling solely to complete your questionnaire, you don't have to wait now, we can call you back. If you would like to schedule a callback, press 1. If you are calling for any other reason, please stay on the line. | | **3.5%** |
| **ACD Broadcast Messages** | **3/9 - 4/7** | Did you know that you can respond to the 2020 Census online at <2020census.gov>? If you're calling to ask for a paper questionnaire, they will be mailed by mid-April. | **15.9%** |
| | **4/8 - 5/4** | Did you know that you can respond to the 2020 Census online at <2020census.gov>? If you're calling to ask for a paper questionnaire, they will be mailed by early May. If you have already completed your Census questionnaire, please disregard any reminders. Our representatives cannot tell you if we have received your response. | |
| | **5/5 - 8/2** | Did you know that you can quickly respond to the required 2020 Census questionnaire online at <2020census.gov>? Complete the 2020 Census today! In August, interviewers will begin visiting homes that have not responded. | |
| | **8/3 - 10/15** | Census Bureau workers are currently gathering responses and verifying information throughout the United States. You can reduce your chances of getting a visit from a census worker by responding to the required 2020 Census over the phone or online at <2020census.gov>. | |
| **ACD Total** | | | **30.3%** |

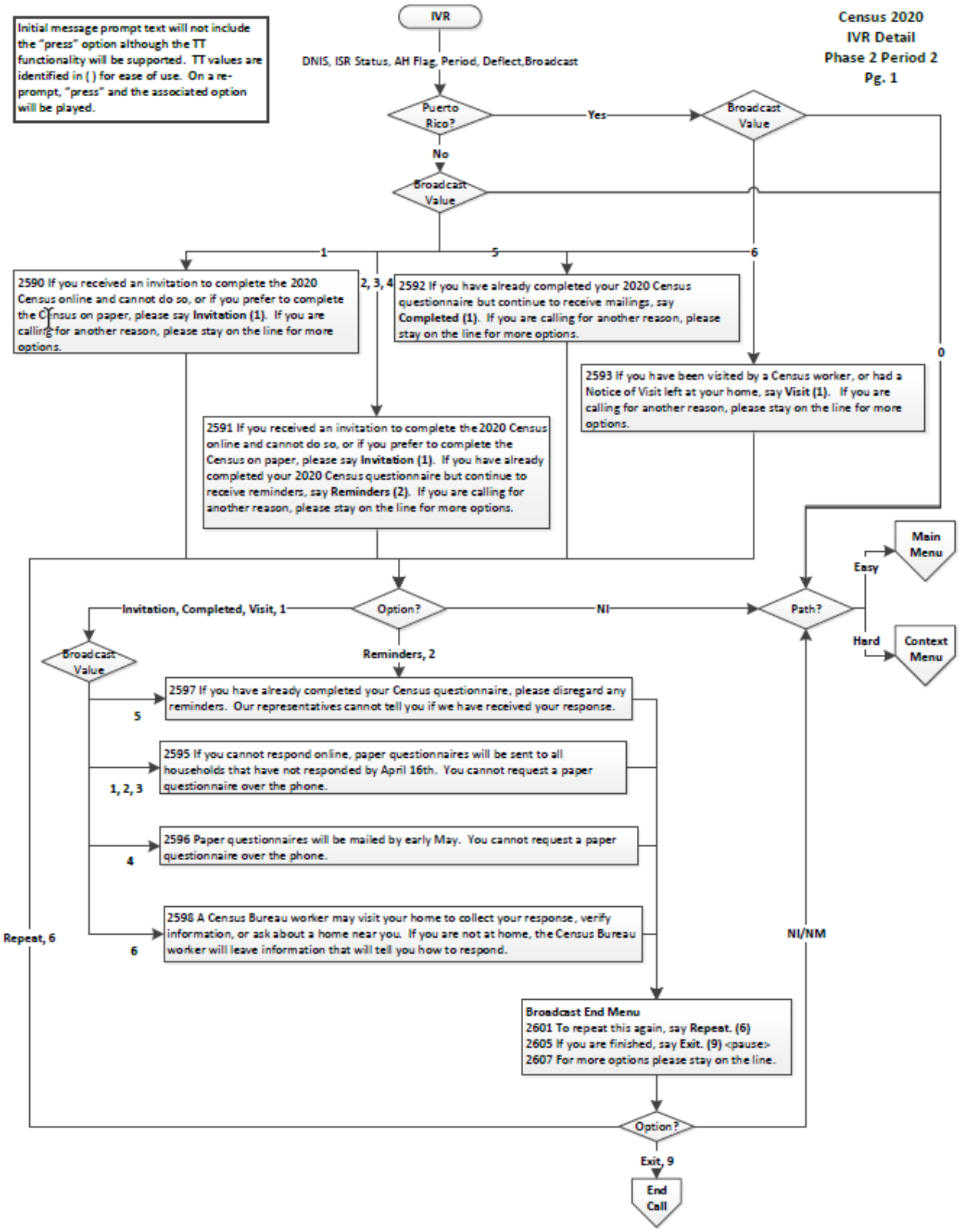
## Appendix D: IVR Broadcast Messaging

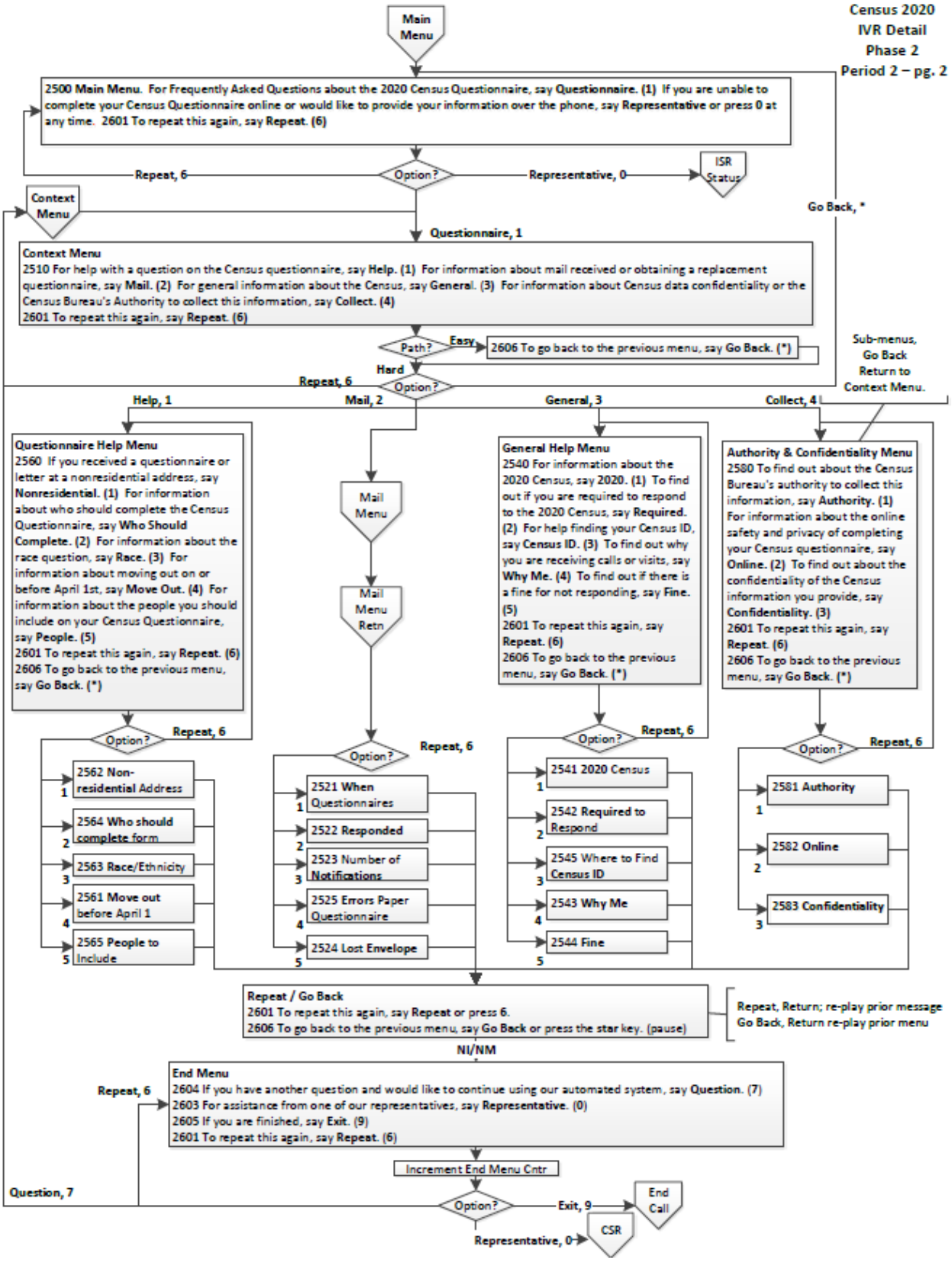
| IVR Messaging | | | |
|---|---|---|---|
| **Location of Hang Up** | **Text Heard by Caller** | | **% of All Deflections** |
| **IVR Broadcast Messages** | **3/9 - 3/15** | If you received an invitation to complete the 2020 Census online and cannot do so, or if you prefer to complete the Census on paper, please say **Invitation** (1). If you are calling for another reason, please stay on the line for more options. | **58.1%** |
| | **3/16 - 5/4** | If you received an invitation to complete the 2020 Census online and cannot do so, or if you prefer to complete the Census on paper, please say **Invitation** (1). If you have already completed your 2020 Census but continue to receive reminders, say **Reminders** (2). If you are calling for another reason, please stay on the line for more options. | |
| | **5/5 - 8/2** | If you have already completed your 2020 Census questionnaire but continue to receive mailings, say **Completed** (1). If you are calling for another reason, please stay on the line for more options. | |
| | **8/3 - 10/15** | If you have been visited by a Census worker or had a Notice of Visit left at your home, say **Visit** (1). If you are calling for another reason, please stay on the line for more options. | |
| | **3/9 - 5/4** | <IF INVITATION> If you cannot respond online, paper questionnaires will be sent to all households that have not responded by April 16th. You cannot request a paper questionnaire over the phone. | |
| | **3/16 - 8/2** | <IF REMINDERS / COMPLETED> If you have already completed your Census questionnaire, please disregard any reminders. Our representatives cannot tell you if we have received your response. | |
| | **4/8 - 5/4** | <IF INVITATION (2)> Paper questionnaires will be mailed by early May. You cannot request a paper questionnaire over the phone. | |
| | **8/3 - 10/15** | <IF VISIT> A Census Bureau worker may visit your home to collect your response, verify information, or ask about a home near you. If you are not at home, the Census Bureau worker will leave information that will tell you how to respond. | |

| | | | |
|---|---|---|---|
| **IVR Self-Service** | **Main Menu** | For frequently asked questions about the 2020 Census questionnaire, say **Questionnaire**. If you are unable to complete your Census questionnaire online or would like to provide your information over the phone, say **Representative** or press 0 at any time. | **9.7%** |
| | **Context Menu** | For help with a question on the Census questionnaire, say **Help**. For information about mail received or obtaining a replacement questionnaire, say **Mail**. For general information about the Census, say **General**. For information about Census data confidentiality or the Census Bureau's authority to collect this information, say **Collect**. | |
| | **FAQs** | Questionnaire Help Menu & FAQs | |
| | | Mail Help Menu & FAQs | |
| | | General Help Menu & FAQs | |
| | | Authority & Confidentiality Menu & FAQs | |
| **Collect Census ID*** | **3/9 - 4/3** | Providing your Census ID will help our representative better serve you. Your 12-digit Census ID can be found within the body of the letter you received from the Census Bureau preceded by the words “Census ID” or below the barcode on the postcard or paper questionnaire. Please say your 12-digit Census ID one letter or number at a time. | **1.9%** |
| **IVR Total** | | | **69.7%** |

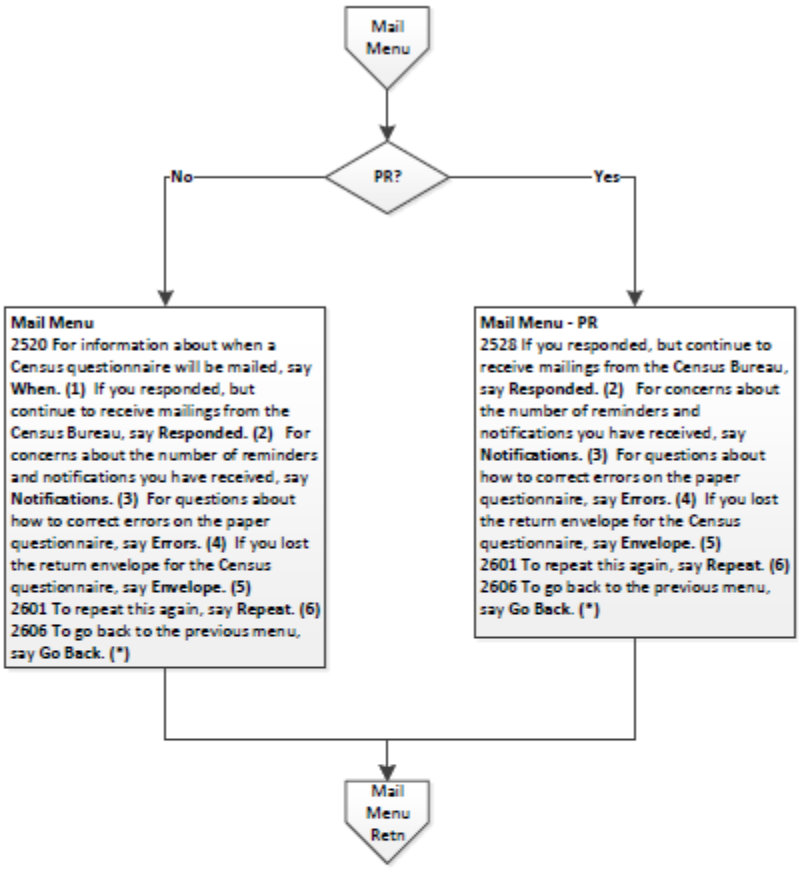
Source: U.S. Census Bureau, 2020 Census, CQA Interactive Tableau Workbook, “Adhoc IVR Path Report.”

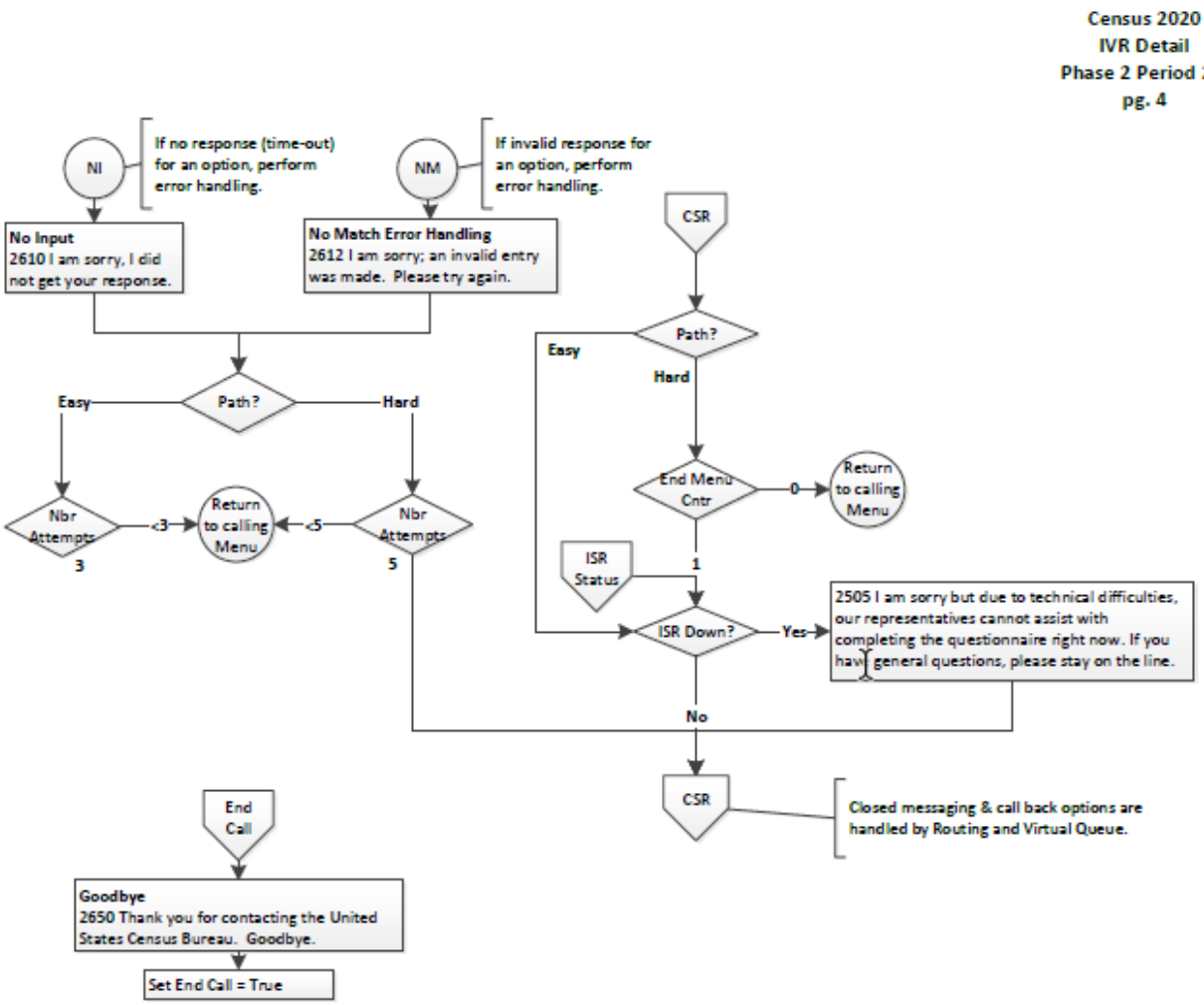
# Appendix E. IVR Call Flow




Census 2020
IVR Detail
Phase 2
Period 2 – pg. 2
Main Menu
2500 Main Menu. For Frequently Asked Questions about the 2020 Census Questionnaire, say Questionnaire. (1) If you are unable to complete your Census Questionnaire online or would like to provide your information over the phone, say Representative or press 0 at any time. 2601 To repeat this again, say Repeat. (6)
Option?
Repeat, 6
Representative, 0
ISR Status
Context Menu
Go Back, *
Questionnaire, 1
Context Menu
2510 For help with a question on the Census questionnaire, say Help. (1) For information about mail received or obtaining a replacement questionnaire, say Mail. (2) For general information about the Census, say General. (3) For information about Census data confidentiality or the Census Bureau's Authority to collect this information, say Collect. (4)
2601 To repeat this again, say Repeat. (6)
Path?
Easy
2606 To go back to the previous menu, say Go Back. (*)
Hard
Option?
Repeat, 6
Sub-menus, Go Back Return to Context Menu.
Help, 1
Mail, 2
General, 3
Collect, 4
Questionnaire Help Menu
2560 If you received a questionnaire or letter at a nonresidential address, say Nonresidential. (1) For information about who should complete the Census Questionnaire, say Who Should Complete. (2) For information about the race question, say Race. (3) For information about moving out on or before April 1st, say Move Out. (4) For information about the people you should include on your Census Questionnaire, say People. (5)
2601 To repeat this again, say Repeat. (6)
2606 To go back to the previous menu, say Go Back. (*)
Mail Menu
Mail Menu Retn
General Help Menu
2540 For information about the 2020 Census, say 2020. (1) To find out if you are required to respond to the 2020 Census, say Required. (2) For help finding your Census ID, say Census ID. (3) To find out why you are receiving calls or visits, say Why Me. (4) To find out if there is a fine for not responding, say Fine. (5)
2601 To repeat this again, say Repeat. (6)
2606 To go back to the previous menu, say Go Back. (*)
Authority & Confidentiality Menu
2580 To find out about the Census Bureau's authority to collect this information, say Authority. (1) For information about the online safety and privacy of completing your Census questionnaire, say Online. (2) To find out about the confidentiality of the Census information you provide, say Confidentiality. (3)
2601 To repeat this again, say Repeat. (6)
2606 To go back to the previous menu, say Go Back. (*)
Option?
Repeat, 6
1 2562 Non-residential Address
2 2564 Who should complete form
3 2563 Race/Ethnicity
4 2561 Move out before April 1
5 2565 People to Include
1 2521 When Questionnaires
2 2522 Responded
3 2523 Number of Notifications
4 2525 Errors Paper Questionnaire
5 2524 Lost Envelope
1 2541 2020 Census
2 2542 Required to Respond
3 2545 Where to Find Census ID
4 2543 Why Me
5 2544 Fine
1 2581 Authority
2 2582 Online
3 2583 Confidentiality
Repeat / Go Back
2601 To repeat this again, say Repeat or press 6.
2606 To go back to the previous menu, say Go Back or press the star key. (pause)
Repeat, Return; re-play prior message
Go Back, Return re-play prior menu
NI/NM
End Menu
2604 If you have another question and would like to continue using our automated system, say Question. (7)
2603 For assistance from one of our representatives, say Representative. (0)
2605 If you are finished, say Exit. (9)
2601 To repeat this again, say Repeat. (6)
Repeat, 6
Increment End Menu Cntr
Question, 7
Option?
Exit, 9
End Call
Representative, 0
CSR

**Census 2020**
**IVR Detail**
**Phase 2**
**Period 2 – pg. 3**




Census 2020
IVR Detail
Phase 2 Period 2 –
pg. 4
NI
If no response (time-out) for an option, perform error handling.
NM
If invalid response for an option, perform error handling.
No Input
2610 I am sorry, I did not get your response.
No Match Error Handling
2612 I am sorry; an invalid entry was made. Please try again.
CSR
Path?
Easy
Hard
Path?
Easy
Hard
End Menu Cntr
0
Return to calling Menu
Nbr Attempts
<3
Return to calling Menu
<5
Nbr Attempts
3
5
ISR Status
1
ISR Down?
Yes
2505 I am sorry but due to technical difficulties, our representatives cannot assist with completing the questionnaire right now. If you hav general questions, please stay on the line.
No
CSR
Closed messaging & call back options are handled by Routing and Virtual Queue.
End Call
Goodbye
2650 Thank you for contacting the United States Census Bureau. Goodbye.
Set End Call = True

# Appendix F. Inbound Quality Scorecards

## Inbound - DQA Scorecard

**UNIFORM VERIFICATION CRITERIA**
§ If CSR fails to confirm the data provided by the respondent and QM can confirm accuracy through hearing the respondent and observing correct entries on screen, no deduction is given. Scoring comments entered by QM: "AOO for CSR to confirm data, no deduction."
§ If the CSR fails to confirm the data provided by the respondent and the QM cannot confirm accuracy through hearing and observing, a deduction is given
§ When selecting a radio button or checkbox, CSR does not need to confirm the selection with the respondent, unless CSR is unclear of the response
§ CSR is to capture all data accurately, no exceptions
§ Populate required data in the correct field(s)
▪ AOO if CSR fails to confirm Census ID using the phonetic alphabet

**Section A. Data Capture**

**To be scored if NO QAE scorecard is evaluated on the same recording.

| 1. Consent to Record | | Performance Expectations |
|---|---|---|
| 1.1 | Provided "Consent to Record" Scripting | ● Read "consent to record" scripting verbatim as it appeared on CSR screen<br>● Received verbal confirmation response from respondent<br>● Read "consent to record" scripting for nonrespondent<br>=> Scoring Direction: AOO for not asking "consent to record" scripting to nonrespondent<br>● Received verbal confirmation response from nonrespondent<br>=> Scoring Direction: AOO if no verbal confirmation response received from nonrespondent |
| 1.2 | Stopped Recording When Respondent Indicates Such | ● CSR turned off recording option when respondent indicated they did not want the call recorded at any time throughout the call |
| **2. Verified Census ID Accurately** | | **Performance Expectations** |
| 2.1 | Correct Number(s); as applicable | • Captured Census ID as stated by respondent |
| 2.2 | Confirmed Census ID; as applicable | • Confirmed Census ID by restating the number and obtaining respondent confirmation<br>Scoring Direction => If CSR fails to confirm the data provided by the respondent and QM can confirm accuracy through hearing the respondent and observing correct entries on screen, no deduction is given. Scoring comments entered by QM: "AOO for CSR to confirm data, no deduction."<br>• If the CSR fails to confirm the data provided by the respondent and the QM cannot confirm accuracy through hearing and observing, a deduction is given |
| **3. Captured Address Accurately** | | **Performance Expectations** |

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|---|---|---|
| 3.1 | Correct Street | • Captured correct street name as stated by respondent<br>• Selected the correct type of address (i.e., street, P.O. box, or rural route)<br>• Combining names or omitting a portion of name may alter accuracy. This could include names on rosters, cities, street addresses, college names, etc.<br>• Examples of data capture errors include:<br>o One or more letters or numbers captured incorrectly or transposed<br>o Selecting an incorrect address type<br>o Missing or incorrect street designation<br>o Missing or incorrect street directional (N, S, E, W)<br>o Incorrect state selected<br>• Address accuracy:<br>o Correct:<br>§ 123 N Columbus St<br>o Incorrect Variations:<br>§ 123 Columbus St N<br>§ 213 N Columbus St<br>§ 123 N Columbus Rd<br>§ 234 Columbus St<br>§ 123 N Clmbs |
| 3.2 | Correct Rural Route (RR) Descriptor | • Captured correct rural route descriptor as stated by respondent |
| 3.3 | Correct RR# | • Captured correct RR# as stated by respondent<br>• Selected the radio button next to the correct option for RR based on respondent's answer |
| 3.4 | Correct RR Box ID | • Captured correct R.R. box ID as stated by respondent |
| 3.5 | Correct Post Office (PO) Box | • Captured correct P.O. box as sated by respondent |
| 3.6 | Correct Apt/Unit | • Captured correct apt/unit as stated by respondent |
| 3.7 | Correct State | • Captured correct state as stated by respondent<br>• Proper use of state abbreviations observed |
| 3.8 | Correct ZIP Code | • Captured correct ZIP Code as stated by respondent |
| 3.9 | Correct Physical Address | • Captured correct physical address as stated by respondent |
| 3.10 | Correct Radio Button Selection for if Anyone is Living at Address | • From list, selected the radio button next to the correct option for if anyone is living at address based on respondent's answer |
| 3.11 | Correct Homelessness Selection | • From list, selected the radio button next to the correct option for homelessness based on respondent's answer |
| 3.12 | **PUERTO RICO**/Correct Address Number Captured | ● Captured correct address number as provided by the respondent |

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|---|---|---|
| 3.13 | **PUERTO RICO**/Correct Street Name Captured | ● Captured correct street name as provided by respondent<br>Note: Some P.O. boxes look like street addresses but are actually the addresses for private mailboxes at a business or the post office. We only want the street address of where you were living or staying on April 1, 2020<br>Note: For Apartment/Condominium/Public Housing Complex Street Addresses, we require the name of the apartment complex and the apartment/unit number, such as "Jardines de Madrid Apt. 5" or "Chalets de Santiago Edif. 5-6." However, other address fields can be used as well |
| 3.14 | **PUERTO RICO**/Correct Municipio | ● Captured correct municipio as provided by respondent |
| 3.15 | **PUERTO RICO**/Correct Zip Code | ● Captured correct ZIP Code as provided by respondent |
| 3.16 | **PUERTO RICO**/Correct Point of Reference | ● Captured correct Point of Reference as provided by respondent<br>• Points of Reference is the description of the structure in which you were living, as well as any important information needed to arrive at your street address |
| 3.17 | **PUERTO RICO**/Correct Apt./Unit | ● Captured correct Apt./Unit as provided by respondent<br>Note: For Apartment/Condominium/ Public Housing Complex Street Addresses, we require the name of the apartment complex and the apartment/unit number, such as "Jardines de Madrid Apt. 5" or "Chalets de Santiago Edif. 5-6." However, other address fields can be used as well |
| 3.18 | **PUERTO RICO**/Correct Apartment Address Captured | ● Captured correct Apartment Address as provided by respondent<br>Note: For Apartment/Condominium/ Public Housing Complex Street Addresses, we require the name of the apartment complex and the apartment/unit number, such as "Jardines de Madrid Apt. 5" or "Chalets de Santiago Edif. 5-6." However, other address fields can be used as well |
| 3.19 | **PUERTO RICO**/ Correct Urbanizacion Name Captured | ● From list, selected the radio button next to the correct option based on respondent's answer<br>● Captured correct street name as provided by respondent<br>Note: For Urbanización Street Addresses, we require the name of the urbanización and the address number, such as "5007 Urb. Las Flores." If your address has a street name, then provide it as well (for example, "Urb. La Joya Del Atlántico, 501 Calle José Martí") |
| 3.2 | **PUERTO RICO**/ Correct Area Name Captured (Barrio, Barriada, Sector, Parcela, Comunidad) | ● From list, selected the radio button next to the correct option based on respondent's answer<br>● Captured correct area name as provided by respondent<br>● Examples of area names<br>§ For Barrio, Barriada, Sector, Parcela, or Comunidad Street Addresses, we require the name of the barrio, barriada, sector, parcela, and/or comunidad, as well as a street name. Oftentimes, an address can be in both a barrio and a sector. If your address has more than one area associated with it, then provide both. If your street is unnamed or the name is unknown, then answer "Unnamed." Examples of these kinds of addresses could look like "Barrio José Martí, Sector El Jardín, #5007 Calle Principal" or "Barriada La Joya, Calle 2, Casa verde." |
| **4. Captured Vacancy Reason Correctly** | | **Performance Expectations** |

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| 4.1 | Correct Selection | • Captured reason for no one living or staying at the address associated with the Census ID<br>• From list, selected the radio button next to the correct vacancy reason based on respondent's answer |
| **5. Captured Respondent Information Correctly** | | **Performance Expectations** |
| 5.1 | Correct Spelling of Name(s) | • NAME REQUIREMENTS:<br>o Captured respondent's name as provided by the respondent<br>§ Include middle name and suffix, if provided<br>§ Hyphenated last names and suffixes should be captured in last name entry field<br>Note: CSR is not to receive a deduction if name capture exceeds character length<br>• Examples of misspelled names:<br>o Correct:<br>§ First Name = Jayne<br>§ Last Name = Stevens<br>o Incorrect:<br>§ First Name = Jane<br>§ Last Name = Stephens |
| 5.2 | Correct Phone Number(s) | • Captured correct phone number(s) as stated by respondent |
| 5.3 | Confirmed Respondent Information | • NAME REQUIREMENTS:<br>o Confirmed respondent name by restating the name provided and obtaining respondent confirmation<br>§ Include middle name and suffix, if provided<br>§ Hyphenated last names and suffixes should be captured in last name entry field<br>• Captured and confirmed respondent phone number as provided and obtained respondent confirmation<br>**Scoring Direction =>** If CSR fails to confirm the data provided by the respondent and QM can confirm accuracy through hearing the respondent and observing correct entries on screen, no deduction is given. Scoring comments entered by QM: "AOO for CSR to confirm data, no deduction."<br>• If the CSR fails to confirm the data provided by the respondent and the QM cannot confirm accuracy through hearing and observing, a deduction is given |
| **6. Captured Roster Accurately** | | **Performance Expectations** |
| 6.1 | Entered Correct Number of Household Members | • Captured number of household members as stated by respondent |
| 6.2 | All Individual(s) Included | • Captured roster name(s) as provided by the respondent correctly; not excluding a household member<br>• From list, selected the radio button next to the correct option for additional people based respondent's answer |

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| 6.3 | Correct Name | • Captured roster name(s) as stated by respondent<br>o Include middle name and suffix, if provided<br>§ Hyphenated last names and suffixes should be captured in last name entry field<br>Note: CSR is not to receive a deduction if name capture exceeds character length |
| 6.4 | Correct Spelling | • Captured correct spelling of roster name(s) as provided by the respondent |
| 6.5 | Confirmed Roster | • Confirmed roster name(s) by spelling reading back the name(s) provided and obtaining respondent confirmation<br>• Confirmed accuracy of roster by restating the number of household members provided by respondent and obtaining confirmation<br>**Scoring Direction =>** If CSR fails to confirm the data provided by the respondent and QM can confirm accuracy through hearing the respondent and observing correct entries on screen, no deduction is given. Scoring comments entered by QM: "AOO for CSR to confirm data, no deduction."<br>• If the CSR fails to confirm the data provided by the respondent and the QM cannot confirm accuracy through hearing and observing, a deduction is given |
| **7. Captured Own/Rent Accurately** | | **Performance Expectations** |
| 7.1 | Correct Selection for Own/Rent | • From list, selected the radio button next to the correct option for own/rent based on respondent's answer |
| 7.2 | Correct Selection for Owner/Renter Name | • From list, selected the radio button next to the correct option for owner/renter based on respondent's answer |
| **8. Captured Relationship Accurately** | | **Performance Expectations** |
| 8.1 | Correct Selection | • From list, selected the radio button next to the correct option for relationship based on respondent's answer |
| **9. Captured Sex Accurately** | | **Performance Expectations** |
| 9.1 | Correct Selection | • From list, selected the radio button next to the correct option for sex based on respondent's answer |
| **10. Captured Date of Birth (DOB) Accurately** | | **Performance Expectations** |
| 10.1 | Correct DOB Selection | • Correctly captured all components of the DOB in the appropriate selection format |
| 10.2 | Correct Age Captured | • Correctly captured estimated age as provided by respondent, as applicable if DOB is unknown |
| 10.3 | Correct Age Confirmation | • From list, selected the radio button next to the correct option for age based on respondent's answer |
| **11. Captured Hispanic / Race / Race Origin Category Accurately** | | **Performance Expectations** |
| 11.1 | Correct Hispanic / Race / Race Origin Selection | • Selected the checkbox next to the correct option for Hispanic / Race / Race Details based on respondent's answer |

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|---|---|---|
| 11.2 | Correct Hispanic / Race / Race Origin Category Selection | • Selected the radio button next to the correct option for race origin or ethnicity category based on respondent's answer<br>• If applicable, correctly complete associated open fields based on correct answer of Hispanic / Race / Race Origin<br>**=> Scoring Direction:** If respondent does not provide a response of "Some other race" when providing a non-race response (i.e., America), CSR should not select the "Some other race" checkbox, but instead add the response into the Some other race field and continue with the interview. AOO if Some other race checkbox is selected<br><br>**=> Scoring Direction:** Any response that is vague or does not explicitly answer the question the CSR is to obtain a verbal confirmation so that the CSR is not assuming the answer<br><br>**=> Scoring Direction:** AOO if CSR selects a race and then selects Refused or Don't Know in response to a race origin that is unknown or refused<br><br>**=> Scoring Direction:** CSR is to capture all respondent race origins, separating each origin with a comma. AOO if CSR fails to separate race origins using a comma |
| **13. Captured Live or Stay Accurately** | | **Performance Expectations** |
| 13.1 | Correct "Roster Name" Lives or Stays Elsewhere Selection | • Selected the radio button next to the correct option for lives or stays elsewhere based on respondent's answer |
| 13.2 | Correct "Roster Name" Lives/Stays Most of the Time Selection | • Selected the radio button next to the correct option for lives/stays most of the time based on respondent's answer |
| 13.3 | Correct "Roster Name" Address Staying on April 1 Selection | • Selected the radio button next to the correct option for address staying on April 1 based on respondent's answer |

# Inbound - QAE Scorecard

| Points | 1. Consent to Record - Inappropriate Procedure | | Performance Expectations |
|---|---|---|---|
| 8 | 1.1 | Provided "consent to record" scripting | ● Read “consent to record” scripting verbatim as it appeared on CSR screen<br>● Received verbal confirmation response from respondent<br>● Read "consent to record" scripting for nonrespondent<br>=> Scoring Direction: AOO for not asking "consent to record" scripting to nonrespondent<br>● Received verbal confirmation response from nonrespondent<br>=> Scoring Direction: AOO if no verbal confirmation response received from nonrespondent |
| 8 | 1.2 | Stopped recording when respondent indicates such | ● CSR turned off recording option when respondent indicated they did not want the call recorded at any time throughout the call |
| 16 | | | |

| | 2. Professional Behavior - Soft Skills | | Performance Expectations |
|---|---|---|---|
| 1 | 2.1 | Used and smoothly delivered appropriate grammar, pronunciation, and enunciation during interaction | ● Maintained professional use of grammar<br>● Spoke clearly and articulated words to ensure respondent understanding (Presentation should be smooth in execution)<br>● Avoided stumbling over words<br>● Used correct pronunciation |
| 1 | 2.2 | Used courteous words throughout the conversation | ● Used courteous words that exemplified excellent customer service throughout the conversation: For example:<br>o Thanked the respondent for their cooperation<br>o When placing respondent on hold, politely asked for permission and thanked them when returning to the call<br>● Demonstrated gratitude for respondent's cooperation |
| 1 | 2.3 | Demonstrated a willingness to assist | ● Demonstrated a willingness to help by responding affirmatively to questions asked by the respondent |
| 1 | 2.4 | Demonstrated a respectful attitude and did not talk over or interrupt respondent | ● Allowed the respondent to complete and finish their sentences and thoughts without interrupting<br>● Allowed the respondent to vent if needed<br>● Responded in a manner that did not interrupt or cut off the respondent without offering an apology for interrupting<br>*Note:* This should only be done when a respondent has veered off topic |

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| **1** | 2.5 | Demonstrated professionalism by not using jargon or slang words | ● Avoided use of jargon and/or slang<br>● Used words, acronyms, or terms that are not universal in understanding or are not deemed as professional<br>o Examples of jargon/slang: “yeah,” “yup,” “what?” “hold on,” “wait a minute,” “you know,” “URL,” “cache,” “huh”<br>**Scoring Direction:** Deduction should occur for use of any of the slang/jargon words listed<br>**Scoring Direction:** Deduction should occur for use of any blatant/obvious slang/jargon words that are universally known to be slang/jargon<br>o Examples of acronyms: “what’s your DOB?” “here at the CB” |
| **1** | 2.6 | Addressed respondent by name as appropriate | ● CSR addressed the respondent by Mr./Ms. last name. If the respondent indicated a preferred name to be called, the CSR followed the request and addressed the respondent by the name provided |
| | **3. Interaction with Respondent - Soft Skills** | | **Performance Expectations** |
| **1** | 3.1 | Acknowledged and/or responded in a positive manner to all of the respondent's questions or concerns | ● Used an engaging, optimistic tone throughout the call by using affirmative words and statements<br>● Used a pleasant tone<br>● Spoke in a manner that assisted in establishing rapport and increased trust with the respondent |
| **1** | 3.2 | Used appropriate level of voice inflection to show interest in conversation | ● Demonstrated good voice inflection to display genuine interest in the conversation by changing the pitch of the voice throughout the call<br>● CSR was not monotone and did not use inaudible voice levels |
| **1** | 3.3 | Responded confidently to demonstrate knowledge and reliability | ● Provided information that demonstrated knowledge and understanding, and built trust with the respondent<br>● Displayed reassurance and reliability; avoided sounding uncertain or doubtful<br>● Avoided repeated use of words such as “um” or “ah”<br>● Responded with detail that reflected knowledge of both the overall and specifics of the questionnaire, purpose, use, and benefits |
| | **4. Call Management - Soft Skills** | | **Performance Expectations** |
| **1** | 4.1 | Remained focused on servicing the respondent’s needs. Directed conversation back to purpose of call if conversation veers off topic | • Replied directly to the respondent’s inquiry with “need to know” information that addressed the inquiry<br>• Provided information that was directly related to the requested topic inquiry<br>• Used phrases that directed the conversation back to the inquiry |

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|---|---|---|---|
| 1 | 4.2 | Appropriately managed/controlled the pace of the call to meet the respondent's needs | ● Demonstrated an efficient pace when moving through the call flow, respecting the respondent's time<br>● Avoided talking so fast that the respondent asked CSR to repeat themselves<br>• Avoided speaking so slowly that the respondent became impatient |
| 2 | 4.3 | Effectively managed "dead air" while searching for information or during system slowness. Kept respondent informed of actions while searching for answers | ● Used filler words and phrases that kept the respondent informed to:<br>o eliminate dead air, or<br>o when experiencing system slowness or researching responses<br>● Responded to the respondent quickly and without hesitation<br>● Used the appropriate hold and mute features during interaction<br>• **Hold protocol:**<br>o Use hold only for escalations (asking for help, noncrisis, etc.)<br>o Ask for permission (e.g., "Can I put you on a brief …")<br>o Explain why (e.g., "while I speak to a supervisor ...")<br>o Check back in 1 minute intervals<br>o Say thank you for waiting<br><br>• **Dead Air protocol:**<br>o CSR is to limit dead air to 30 seconds maximum<br><br>=> Scoring Direction: Any infraction of the above protocol bullets will result in a deduction including hold times which exceed 1 minute in duration<br><br>=> Scoring Direction: Any infraction of the above protocol bullets will result in a deduction including dead air times which exceed 30 seconds in duration |
| 2 | 4.4 | Apologized for delays, system slowness, etc. | • Used empathy statements throughout the conversation as needed to apologize for delays, system slowness, seeking Lead CSR assistance, etc. |
| 2 | 4.5 | Followed all call handling instructions as appropriate | • Completed the entire call in the language that the call was taken in, unless there was a need to mix languages based on respondent understanding and clarification. Example: Korean CSR is speaking to a Korean respondent in Korean but uses an English word as there is no Korean language equivalent for that word<br>• Transferred the respondent to the appropriate language queue |
| | **5. Active Listening - Soft Skills** | | **Performance Expectations** |
| 1 | 5.1 | Acknowledged the respondent's responses to demonstrate understanding | ● Provided confirmation or acknowledgement of the respondent's response<br>● Responded in a manner that displayed active listening by communicating an understanding of the respondent's statement |
| 1 | 5.2 | Paraphrased, clarified or probed as appropriate to ensure understanding of respondent's questions when necessary | ● Demonstrated understanding of respondent's concern or inquiry by restating/paraphrasing questions to demonstrate comprehension as necessary<br>● Asked appropriate, clarifying, or probing questions that led the respondent to provide specific information necessary to assist<br>Note: Deduction only if additional probing questions or clarification was necessary |

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| **1** | 5.3 | Demonstrated active listening to ensure respondent did not have to repeat already provided information | ● Controlled the call by eliminating the need to have the respondent repeat information multiple times or where information was available through other resources<br>● Paid close attention to the respondent to avoid asking them to repeat themselves |

| | **6. System Navigation - Technical Procedures** | | **Performance Expectations** |
|---|---|---|---|
| **2** | 6.1 | Used effective search methods | ● Used effective keyword search based on respondent's question<br>● Did not use multiple key words searching for answers throughout the call |
| **1** | 6.2 | Efficiently navigated system as appropriate during call | ● CSR navigated the system effectively and only accessed the appropriate screens necessary to assist the respondent<br>● Did not access any unnecessary screens during the call |
| **6** | 6.3 | Correct call reason selected | ● Selected the correct call reason that was identified at the beginning of the call |
| **4** | 6.4 | Correct call disposition selected | ● Selected correct call disposition as appropriate based on the actions taken/outcome of the call. Example:<br>o Respondent calls with a question, but the call progresses to enumeration. The call disposition is enumeration<br>Note: CSRs do not disposition NENS transferred calls |
| **5** | 6.5 | Correctly linked FAQ used to address respondent's inquiry | ● Any FAQ that was used to answer the respondent's question must be linked<br>*Note*: CSR not linking an FAQ(s) results in a deduction. CSR linking incorrect FAQ(s) results in a deduction |
| | **7. Script Adherence - Mandatory Procedures** | | **Performance Expectations** |

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| **5** | 7.1 | Adhered to black scripted text as appropriate | ● Read all Bold Black Text and Scripts verbatim as they appeared on CSR's screen<br>● STOPPED and reread the scripted text when read incorrectly. Points are not deducted when a CSR stops after making a mistake and restates verbatim script correctly<br>● Inserted or omitted words that changed the context or content of scripted text<br>o Read scripted text verbatim without mispronouncing, inserting, or omitting words that may change the meaning<br>o Minor omissions or inserts that do not change the meaning of the scripted text are allowed (i.e., a, an, the)<br><br>=> Scoring Direction: If Census ID is auto-populated, CSR does not need to read the part of the script asking for the Census ID.<br><br>=> Scoring Direction: Race Screen<br>CSR is required to read all races the first time verbatim. CSR is required to attempt to read all races for second household member, however, if interrupted CSR does not have to read all races. For third household member and beyond, CSR is to ask what is roster's race? AOO for CSRs who read the Race question for third household member and beyond<br><br>=> Scoring Direction: Relationship Screen<br>CSR is required to read all relationship options the first time verbatim. CSR is required to attempt to read all relationship options for second household member, however, if interrupted CSR does not have to read all relationship options. For third household member and beyond, CSR is to ask how is roster related to respondent? |
| **1** | 7.2 | Correctly utilized help text when needed | ● Help text scripting if read must be read verbatim with the resource on the screen<br>*o Help text is utilized when appropriate to assist the respondent. It is accessed via a blue help link*<br>● Help text scripting must be read verbatim for only the piece(s) that apply to the caller's question<br>● Help text instructions must be followed by CSR as applicable |

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| **5** | 7.3 | Accurately read FAQ/Job Aid scripted text verbatim with resource on screen | ● CSR selected the appropriate FAQ(s)/Job Aid(s) that addressed the respondent's inquiry<br>=> Scoring Direction: Score as AOO only if CSR reads the incorrect FAQ, but the respondent indicates that the FAQ answered their question<br>● Read FAQ/Job Aid scripted text verbatim with the resource on the screen<br>● If a respondent gives an indication that the CSR has provided the information requested, the CSR is not required to read all scripted content in the FAQ/Job Aid<br>o Use of transitional phrases are allowed while FAQ is being accessed<br>o Ad libbing (i.e., making up an answer) is not allowed, however, paraphrasing correctly is allowed when an FAQ/Job Aid is also read verbatim<br>o If the FAQ includes optional text (blue, italicized scripted text) and it is read, it must be read verbatim<br>● If no FAQ is available, CSRs must read the "No Knowledge Article Available" job aid<br>● CSR should not insert or omit words that change the context or content of the FAQ/Job Aid scripted text<br>o Read FAQ/Job Aid without mispronouncing, inserting, or omitting words that change the meaning<br>o Minor omissions or inserts that do not change the meaning of the scripted text are allowed (i.e., a, an, the)<br>o Paraphrasing FAQ/Job Aid scripting incorrectly will result in a deduction |
| **49** | | | |
| | **8. Unacceptable Behaviors - Inappropriate Procedures** | | **Performance Expectations** |
| **5** | 8.1 | Stated anything that can be interpreted as discriminatory | ● Used scripted answers to ensure there was no chance that any response to the respondent could be interpreted as biased or prejudiced<br>● Reacted in a professional and courteous manner – did not make any negative, unnecessary or improper statements related to diversity, ethnicity, citizenship, politics, race, sex, marital status, or any other information exchanged |
| **5** | 8.2 | Stated anything that may be interpreted as disparaging to the Census Bureau or any entity, or used profanity or any inappropriate language | ● **Avoided** initiating, fostering and/or offering personal opinions, comments or viewpoints that were negative or disparaging toward the Census Bureau, any person or any other entity. For example:<br>o "I agree with you a 100%, the Census Bureau shouldn't be asking those types of questions."<br>o "My opinion is that the Census Bureau is a joke."<br>o "Immigrants shouldn't be here."<br>● CSR should never resort to using profanity/vulgarity under any circumstances |
| **5** | 8.3 | Call Avoidance - stopped responding during call | ● Stayed engaged throughout the call to ensure the respondent did not think the call had ended |

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|---|---|---|---|
| **5** | 8.4 | Call Avoidance - disconnected call before interaction was completed | ● Ensured the call was disconnected only after it was completed and the respondent was engaged in ending the conversation<br>● Used the closing statement when call was completed to ensure the call was not prematurely disconnected<br>*Note:* Observance of inappropriate disconnect must be observed or validated. Example: Screen capture review, system/report indicators. Audio of dead air does not confirm CSR has disconnected the call |
| **5** | 8.5 | Call Avoidance - delay in script opening | ● Provided opening immediately when call was received<br>=> Scoring Direction: CSR must acknowledge receipt of call by providing the Greeting script in English immediately upon receipt of call (not applicable to single skilled NENS only CSRs)<br><br>=> Scoring Direction: CSR must acknowledge receipt of call by providing the applicable language Greeting script immediately upon receipt of call (applicable for single skilled NENS only CSRs)<br><br>Note: Any CSR caused delays in acknowledging respondent when call is received. Example:<br>o CSR is engaging in side-talk with other CSRs<br>o CSR is clearly not prepared when call is received<br>o CSR not paying attention when call comes in |
| **5** | 8.6 | Falsified data | ● Entered data accurately to ensure no falsified or misrepresented information was entered |
| **5** | 8.7 | Failed to demonstrate self-control and patience | ● Demonstrated self-control based on respondent's actions:<br>For example:<br>o Remained composed and controlled emotions when respondent became upset<br>o Used excellent customer service skills to deescalate an upset caller<br>o Avoided addressing the respondent in a manner that would agitate an escalated situation<br>o Did not match the respondent's emotion in an escalated situation |
| **35** | | | |
| | | | |
| **100** | | | |

# Appendix G. Outbound Coverage Improvement (CI) Quality Scorecards

## Outbound Coverage Improvement - DQA Scorecard

**UNIFORM VERIFICATION CRITERIA**
§ If CSR fails to confirm the data provided by the respondent and QM can confirm accuracy through hearing the respondent and observing correct entries on screen, no deduction is given. Scoring comments entered by QM: "AOO for CSR to confirm data, no deduction."
§ If the CSR fails to confirm the data provided by the respondent and the QM cannot confirm accuracy through hearing and observing, a deduction is given
§ When selecting a radio button or checkbox, CSR does not need to confirm the selection with the respondent, unless CSR is unclear of the response
§ CSR is to capture all data accurately, no exceptions
§ Populate required data in the correct field(s)
▪ AOO if CSR fails to confirm Census ID using the phonetic alphabet
**To be scored if NO QAE scorecard is evaluated on the same recording.

| 1. Consent to Record | | Performance Expectations |
|---|---|---|
| 1.1 | Provided "consent to record" scripting | ● Read “consent to record” scripting verbatim as it appeared on CSR screen<br>● Received verbal confirmation response from respondent<br>● Read "consent to record" scripting for nonrespondent<br>=> Scoring Direction: AOO for not asking "consent to record" scripting to nonrespondent<br>● Received verbal confirmation response from nonrespondent<br>=> Scoring Direction: AOO if no verbal confirmation response received from nonrespondent |
| 1.2 | Stopped recording when respondent indicates such | ● CSR turned off recording option when respondent indicated they did not want the call recorded at any time throughout the call |
| **2. Verified Original or Eligible Respondent** | | **Performance Expectations** |
| 2.1 | Verified Original or Eligible Respondent | ● CSR verified the appropriate respondent (original or eligible) by following the prequalification guidelines for first and second contact<br>● CSR confirmed eligibility when original respondent was not available |
| 2.2 | Captured 12-digit Census ID/Phone Number | ● Accurately captured the 12-digit Census ID/Phone Number as provided by the respondent (Applies to Rescheduled Callback only) |
| **3. Captured Roster Accurately** | | **Performance Expectations** |

| | | |
|---|---|---|
| 3.1 | Correctly Added Individual(s), as applicable | ● Ensured data was captured accurately as stated or spelled out by the respondent<br>● Example of a data capture error:<br>o One or more letters captured incorrectly or transposed<br>● Captured roster name(s) as provided by the respondent correctly; not excluding a household member<br>o If CSR misspells roster name no deduction is given. Scoring comments entered by QM: AOO for CSR to ensure correct spelling of all roster names<br>o Include middle name and suffix, if provided<br>§ Hyphenated last names and suffixes should be captured in last name entry field<br>Note: CSR is not to receive a deduction if name capture exceeds character length |
| 3.2 | Correctly Removed Individual(s), as applicable | ● Removed roster name(s) as provided by the respondent correctly<br>● Example of a data capture error:<br>o One or more letters captured incorrectly or transposed |
| 3.3 | Confirmed Name(s) When Capturing Data | NAME REQUIREMENT:<br>o Confirmed roster name(s) by reading the name(s) and obtaining respondent confirmation<br>o If CSR misspells roster name no deduction is given. Scoring comments entered by QM: AOO for CSR to ensure correct spelling of all roster names<br>o Include middle name and suffix, if provided<br>§ Hyphenated last names and suffixes should be captured in last name entry field<br>Note: CSR is not to receive a deduction if name capture exceeds character length<br>● Combining names or omitting a portion of name may alter accuracy. This could include names on rosters, cities, street addresses, college name, etc.<br><br>Scoring Direction => If CSR fails to confirm the data provided by the respondent and QM can confirm accuracy through hearing the respondent and observing correct entries on screen, no deduction is given. Scoring comments entered by QM: “AOO for CSR to confirm data, no deduction.”<br>• If the CSR fails to confirm the data provided by the respondent and the QM cannot confirm accuracy through hearing and observing, a deduction is given |
| 3.4 | Obtained Data for Other People/Occupants (Undercount) | ● Ensured data was captured accurately as stated or spelled out by the respondent<br>● Captured household member data or other occupants as provided by the respondent accurately |
| **4. Captured Demographics Accurately** | | **Performance Expectations** |
| 4.1 | Correct Selection for Male/Female | ● Captured appropriate radio button for male/female as provided by the respondent |
| 4.2 | Correct Selection for Date of Birth | ● Correctly captured all components of the DOB in the appropriate selection format |

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| 4.3 | Correct Age Captured | ● Correctly captured estimated age as provided by respondent, as applicable if DOB is unknown |
| 4.4 | Correct Selection for Relationship | ● Captured respondent's relationship correctly<br>● From list, selected the radio button next to the correct option for relationship based on respondent's answer |
| **5. Captured Live or Stay Accurately** | | **Performance Expectations** |
| 5.1 | Correct Selection for "Does <NAME#> usually live or stay somewhere else, other than <ADDRESS>," | ● From list, selected the radio button next to the correct option based on respondent's answer<br>● Correctly captured reason person lives or stays somewhere else |
| 5.2 | Correct State radio button for "Was the place where <NAME#> sometimes lives or stays … State/DC, Puerto Rico, somewhere else?" | ● From list, selected the radio button next to the correct option based on respondent's answer |
| 5.3 | Correct Selection for "Where was <NAME#> staying" on April 1 | ● From list, selected the radio button next to the correct option based on respondent's answer |
| 5.4 | State/DC: correct entry of street address | ● Entered correct entry of street address (Address Number, Street Name), as applicable |
| 5.5 | State/DC: correct entry of RR address (if applicable) | ● Entered correct entry of RR address |
| 5.6 | State/DC: correct entry of physical description (as applicable) | ● Entered correct entry of physical description<br>● Combining names or omitting a portion of name may alter accuracy. This could include names on rosters, cities, street addresses, college name, etc. |
| 5.7 | State/DC: correct entry of facility name | ● Entered correct entry of facility name<br>● Combining names or omitting a portion of name may alter accuracy. This could include names on rosters, cities, street addresses, college name, etc. |
| 5.8 | State/DC: Correct Rural Route Descriptor | ● Entered correct Rural Route Descriptor<br>● When entering a RR address in STATESIDE ALT ADDRESS RR screen, select the appropriate RR descriptor<br>RR (Rural Route)<br>HC (Contract Delivery Service)<br>SR (Start Route)<br>PSC (Postal Service Center)<br>(RTE) (Route)<br>● Examples of data capture errors include:<br>o One or more letters or numbers captured incorrectly or transposed<br>o Selecting an incorrect address type<br>o Missing or incorrect street designation<br>o Missing or incorrect street directional (N, S, E, W) |
| 5.9 | State/DC: Correct Rural Route # Captured | ● Entered correct Rural Route #<br>● Example of a data capture error:<br>o One or more numbers captured incorrectly or transposed |
| 5.1 | State/DC: Correct Rural Route Box ID Captured | ● Entered correct Rural Route Box ID<br>● Example of a data capture error:<br>o One or more numbers captured incorrectly or transposed |

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| 5.11 | State/DC: Correct Apt/Unit Captured | ● Example of a data capture error:<br>o One or more letters or numbers captured incorrectly or transposed |
| 5.12 | State/DC: Correct State | ● Examples of data capture errors include:<br>o One or more letters captured incorrectly or transposed<br>o Incorrect state selected<br>● Proper use of state abbreviations observed |
| 5.13 | State/DC: Correct ZIP Code Captured | ● Entered correct ZIP Code<br>● Example of a data capture error:<br>o One or more numbers captured incorrectly or transposed |
| 5.14 | Confirmed Address | ● Confirmed Address by reading it back to respondent and obtaining confirmation<br>● Combining names or omitting a portion of name may alter accuracy. This could include names on rosters, cities, street addresses, college name, etc.<br><br>**Scoring Direction =>** If CSR fails to confirm the data provided by the respondent and QM can confirm accuracy through hearing the respondent and observing correct entries on screen, no deduction is given. Scoring comments entered by QM: "AOO for CSR to confirm data, no deduction."<br>• If the CSR fails to confirm the data provided by the respondent and the QM cannot confirm accuracy through hearing and observing, a deduction is given |
| 5.15 | PUERTO RICO/Correct Selection for "Is the place where <NAME> usually lives or stays …in an apartment building that has a name?" | ● From list, selected the radio button next to the correct option based on respondent's answer |
| 5.16 | PUERTO RICO/Correct Address Number Captured | ● Captured correct address number as provided by the respondent |
| 5.17 | PUERTO RICO/Correct Street Name Captured | ● Captured correct street name as provided by respondent<br>Note: Some P.O. Boxes look like street addresses but are actually the addresses for private mailboxes at a business or the post office. We only want the street address of where you were living or staying on April 1, 2020<br>Note: For Apartment/Condominium/ Public Housing Complex Street Addresses, we require the name of the apartment complex and the apartment/unit number, such as "Jardines de Madrid Apt. 5" or "Chalets de Santiago Edif. 5-6." However, other address fields can be used as well |
| 5.18 | PUERTO RICO/Correct Municipio | ● Captured correct Municipio as provided by respondent |
| 5.19 | PUERTO RICO/Correct ZIP Code | ● Captured correct ZIP Code as provided by respondent |
| 5.2 | PUERTO RICO/Correct Point of Reference | ● Captured correct Point of Reference as provided by respondent<br>• Points of Reference is the description of the structure in which you were living, as well as any important information needed to arrive at your street address |

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| 5.21 | PUERTO RICO/Correct Apt./Unit | ● Captured correct Apt./Unit as provided by respondent<br>Note: For Apartment/Condominium/ Public Housing Complex Street Addresses, we require the name of the apartment complex and the apartment/unit number, such as “Jardines de Madrid Apt. 5” or “Chalets de Santiago Edif. 5-6.” However, other address fields can be used as well |
| 5.22 | PUERTO RICO/Correct Apartment Address Captured | ● Captured correct Apartment Address as provided by respondent<br>Note: For Apartment/Condominium/ Public Housing Complex Street Addresses, we require the name of the apartment complex and the apartment/unit number, such as “Jardines de Madrid Apt. 5” or “Chalets de Santiago Edif. 5-6.” However, other address fields can be used as well |
| 5.23 | PUERTO RICO/ Correct Urbanizacion Name Captured | ● From list, selected the radio button next to the correct option based on respondent’s answer<br>● Captured correct street name as provided by respondent<br>Note: For Urbanización Street Addresses, we require the name of the urbanización and the address number, such as “5007 Urb. Las Flores.” If your address has a street name, then provide it as well (for example, “Urb. La Joya Del Atlántico, 501 Calle José Martí”) |
| 5.24 | PUERTO RICO/ Correct Area Name Captured (Barrio, Barriada, Sector, Parcela, Comunidad) | ● From list, selected the radio button next to the correct option based on respondent’s answer<br>● Captured correct area name as provided by respondent<br>● Examples of area names<br>§ For Barrio, Barriada, Sector, Parcela, or Comunidad Street Addresses, we require the name of the barrio, barriada, sector, parcela, and/or comunidad, as well as a street name. Oftentimes, an address can be in both a barrio and a sector. If your address has more than one area associated with it, then provide both. If your street is unnamed or the name is unknown, then answer “Unnamed.” Examples of these kinds of addresses could look like “Barrio José Martí, Sector El Jardín, #5007 Calle Principal” or “Barriada La Joya, Calle 2, Casa verde.” |
| **6. Captured Call back Information Accurately** | | **Performance Expectations** |
| 6.1 | Appropriately scheduled callback | ● When appropriate CSR is to request a call back for an appointment<br>● Captured the appointment time and date accurately |
| 6.2 | Obtained an alternate phone number for call back when applicable | ● When appropriate CSR is to capture alternate call back phone number accurately |

# Outbound Coverage Improvement - QAE Scorecard

| Points | 1. Consent to Record - Inappropriate Procedures | | Performance Expectations |
|---|---|---|---|
| 4 | 1.1 | Provided "consent to record" scripting | ● Read "consent to record" scripting verbatim as it appeared on CSR screen<br>● Received verbal confirmation response from respondent<br>● Read "consent to record" scripting for nonrespondent<br>=> Scoring Direction: AOO for not asking "consent to record" scripting to nonrespondent<br>● Received verbal confirmation response from nonrespondent<br>=> Scoring Direction: AOO if no verbal confirmation response received from nonrespondent |
| 4 | 1.2 | Stopped recording when respondent indicates such | ● CSR turned off recording option when respondent indicated they did not want the call recorded at any time throughout the call |
| 8 | | | |
| | **2. Professional Behavior - Soft Skills** | | **Performance Expectations** |
| 1 | 2.1 | Used and smoothly delivered appropriate grammar, pronunciation, and enunciation during interaction | • Maintained professional use of grammar<br>• Spoke clearly and articulated words to ensure respondent understanding (Presentation was smooth in execution)<br>• Avoided stumbling over words<br>• Used correct pronunciation |
| 1 | 2.2 | Used courteous words throughout the conversation | ● Used courteous words that exemplified excellent customer service throughout the conversation: For example:<br>o Thanked the respondent for their cooperation<br>o When placing respondent on hold, politely asked for permission and thanked them when returning to the call<br>● Demonstrated gratitude for respondent's cooperation |
| 1 | 2.3 | Demonstrated a willingness to assist | • Demonstrated a willingness to help by responding affirmatively to questions asked by the respondent |
| 1 | 2.4 | Demonstrated a respectful attitude and did not talk over or interrupt respondent | ● Allowed the respondent to complete and finish their sentences and thoughts without interrupting<br>● Allowed the respondent to vent if needed<br>● Responded in a manner that did not interrupt or cut off the respondent without offering an apology for interrupting<br>*Note:* This should only be done when a respondent has veered off topic |
| 1 | 2.5 | Demonstrated professionalism by not using jargon or slang words | ● Avoided use of jargon and/or slang<br>● Refrained from using words, acronyms, or terms that were not universal in understanding or were not deemed as professional<br>o Examples of jargon/slang: "yeah," "yup," "what?" "hold on," "wait a minute," "you know," "URL," "cache," "huh"<br>**Scoring Direction:** Deduction should occur for use of any of the slang/jargon words listed<br>**Scoring Direction:** Deduction should occur for use of any blatant/obvious slang/jargon words that are universally known to be |

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| | | | slang/jargon<br>o Examples of acronyms: “what’s your DOB?” “here at the CB” |
| **1** | 2.6 | Addressed respondent by name as appropriate | • CSR addressed the respondent by Mr./Ms. last name. If the respondent indicates a preferred name to be called, the CSR should then follow the request and address the respondent by the name provided |
| | **3. Interaction with Respondent - Soft Skills** | | **Performance Expectations** |
| **1** | 3.1 | Acknowledged and/or responded in a positive manner to all of the respondent's questions or concerns | ● Used an engaging, optimistic tone throughout the call by using affirmative words and statements<br>● Used a pleasant tone<br>● Spoke in a manner that assisted in establishing rapport and increased trust with the respondent |
| **1** | 3.2 | Used appropriate level of voice inflection to show interest in conversation | • Demonstrated good voice inflection to display genuine interest in the conversation by changing the pitch of the voice throughout the call<br>• CSR was not monotone and did not use inaudible voice levels |
| **1** | 3.3 | Responded confidently to demonstrate knowledge and reliability | • Provided information that demonstrated knowledge and understanding, and built trust with the respondent<br>• Avoided sounding uncertain or doubtful<br>• Avoided repeated use of words such as “um” or “ah”<br>• Responded with detail that reflected knowledge of both the overall and specifics of the questionnaire, purpose, use, and benefits |
| | **4. Call Management - Soft Skills** | | **Performance Expectations** |
| **1** | 4.1 | Remained focused on servicing the respondent's needs. Directed conversation to purpose of call if conversation veers off topic. | • Replied directly to the respondent’s inquiry with “need to know” information that addressed the inquiry<br>• Provided information that was directly related to the requested topic inquiry<br>• Used phrases that directed the conversation back to the inquiry |
| **1** | 4.2 | Appropriately managed/controlled the pace of the call to meet the respondent's needs | ● Demonstrated an efficient pace when moving through the call flow, respecting the respondent’s time<br>● Avoided talking so fast that the respondent asked CSR to repeat themselves<br>● Avoided speaking so slowly that the respondent became impatient |

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| **2** | 4.3 | Effectively managed "dead air" while searching for information or during system slowness. | ● Used filler words and phrases that kept the respondent informed to:<br>o eliminate dead air, or<br>o when experiencing system slowness or researching responses<br>● Responded to the respondent quickly and without hesitation<br>● Used the appropriate hold and mute features during interaction.<br>• Hold protocol:<br>o Use hold only for escalations (asking for help, noncrisis, etc.)<br>o Ask for permission (e.g., "Can I put you on a brief …")<br>o Explain why (e.g., "while I speak to a supervisor ...")<br>o Check back in 1 minute intervals<br>o Say thank you for waiting<br><br>• Dead Air protocol:<br>o CSR is to limit dead air to 30 seconds maximum<br><br>=> Scoring Direction: Any infraction of the above protocol bullets will result in a deduction including hold times which exceed 1 minute in duration<br><br>=> Scoring Direction: : Any infraction of the above protocol bullets will result in a deduction including dead air times which exceed 30 seconds in duration |
| **2** | 4.4 | Apologized for delays, system slowness, etc. | ● Used empathy statements throughout the conversation as needed to apologize for delays, system slowness, seeking Lead CSR assistance, etc. |
| **2** | 4.5 | Followed all call handling instructions as appropriate | ● Completed the entire call in the language that the call was taken in<br>● Follow appropriate call handling procedures for respondent does not speak English |
| | **5. Active Listening - Soft Skills** | | **Performance Expectations** |
| **1** | 5.1 | Acknowledged the respondent's responses to demonstrate understanding | • Provided confirmation or acknowledged the respondent's response<br>• Responded in a manner that displayed active listening by communicating an understanding of the respondent's statement |
| **1** | 5.2 | Paraphrased, clarified or probed as appropriate to ensure understanding of respondent's questions when necessary | • Demonstrated understanding of respondent's concern or inquiry by restating/paraphrasing questions to demonstrate comprehension as necessary<br>• Asked appropriate, clarifying, or probing questions that led the respondent to provide specific information necessary to assist<br>*Note:* Deduction only if additional probing questions or clarification was necessary |
| **1** | 5.3 | Demonstrated active listening to ensure respondent did not have to repeat already provided information | • Controlled the call by eliminating the need to have the respondent repeat information multiple times or where information was available through other resources<br>• Paid close attention to the respondent to avoid asking them to repeat themselves |

| | 6. System Navigation - Technical Procedures | | Performance Expectations |
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| **2** | 6.1 | Used effective search methods | • Used effective keyword search based on respondent's question<br>• Did not use multiple key words searching for answers throughout the call |
| **1** | 6.2 | Efficiently navigated system as appropriate during call | • CSR navigated the system effectively and only accessed the appropriate screens necessary to assist the respondent<br>• Did not access any unnecessary screens during the call |
| **4** | 6.3 | Correct call disposition selected | ● Selected correct call disposition as appropriate based on the actions taken/outcome of the call.<br>Example:<br>o Respondent calls with a question, but the call progresses to enumeration. The call disposition is enumeration<br>Note: CSRs do not disposition NENS transferred calls |
| **3** | 6.4 | Correctly linked FAQ used to address respondent's inquiry | ● CSR correctly linked all FAQs that were used to answer the respondent's question(s)<br>*Note*: CSR not linking an FAQ(s) result in a deduction. CSR linking incorrect FAQ(s) results in a deduction |
| | **7. Script Adherence - Mandatory Procedures** | | **Performance Expectations** |
| **3** | 7.1 | Adhered to black scripted text as appropriate | ● Read all Bold Black Text and Scripts verbatim as they appeared on CSR screen<br>● STOPPED and reread the scripted text when read incorrectly. Points are not deducted when a CSR stops after making a mistake and restates verbatim script correctly<br>● Did not Insert or omit words that changed the context or content of scripted text<br>o Read scripted text verbatim without mispronouncing, inserting, or omitting words that may change the meaning<br>o Minor omissions or inserts that do not change the meaning of the scripted text are allowed (i.e., a, an, the)<br><br>=> Scoring Direction: If Census ID is auto-populated, CSR does not need to read the part of the script asking for the Census ID.<br><br>=> Scoring Direction: Race Screen<br>CSR is required to read all races the first time verbatim. CSR is required to attempt to read all races for second household member, however, if interrupted CSR does not have to read all races. For third household member and beyond, CSR is to ask what is roster's race? AOO for CSRs who read the Race question for third household member and beyond<br><br>=> Scoring Direction: Relationship Screen<br>CSR is required to read all relationship options the first time verbatim. CSR is required to attempt to read all relationship options for second household member, however, if interrupted CSR does not have to read all relationship options. For third household member and beyond, CSR is to ask how is roster related to respondent? |

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| 1 | 7.2 | Correctly utilized help text when needed | ● Help text scripting if read must be read verbatim with the resource on the screen<br>o Help text is utilized when appropriate to assist the respondent. It is accessed via a blue help link<br>● Help text scripting must be read verbatim for only the piece(s) that apply to the caller's question |
| 2 | 7.3 | Accurately read FAQ/Job Aid scripted text verbatim with resource on screen | ● CSR selected the appropriate FAQ(s)/Job Aid(s) that addressed the respondent's inquiry<br>=> Scoring Direction: Score as AOO only if CSR reads the incorrect FAQ, but the respondent indicates that the FAQ answered their question<br>● Read FAQ/Job Aid scripted text verbatim with the resource on the screen<br>● If a respondent gives an indication that the CSR has provided the information requested, the CSR is not required to read all scripted content in the FAQ/Job Aid<br>o Use of transitional phrases are allowed while FAQ is being accessed<br>o Ad-libbing (i.e., making up an answer) is not allowed, however, paraphrasing correctly is allowed when an FAQ/Job Aid is also read verbatim<br>o If the FAQ includes optional text (blue, italicized scripted text) and it is read, it must be read verbatim<br>● If no FAQ is available, CSRs must read the 'No Knowledge Article Available" job aid<br>● CSR should not insert or omit words that change the context or content of the FAQ/Job Aid scripted text<br>o Read FAQ/Job Aid scripted text without mispronouncing, inserting, or omitting words that change the meaning<br>o Minor omissions or inserts that do not change the meaning of the scripted text are allowed (i.e., a, an, the)<br>o Paraphrasing FAQ/Job Aid scripting incorrectly will result in a deduction |
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| | **8. Unacceptable Behaviors - Inappropriate Procedures** | | **Performance Expectations** |
| 8 | 8.1 | Stated anything that can be interpreted as discriminatory | ● Used scripted answers to ensure there was no chance that any response to the respondent could be interpreted as biased or prejudiced<br>● Reacted in a professional and courteous manner – did not make any negative, unnecessary or improper statements related to diversity, ethnicity, citizenship, politics, race, sex, marital status, or any other information exchanged |
| 8 | 8.2 | Stated anything that may be interpreted as disparaging to the Census Bureau or any entity, or used profanity or any inappropriate language | ● Avoided initiating, fostering and/or offering personal opinions, comments or viewpoints that were negative or disparaging toward the Census Bureau, any person or any other entity<br>● For example:<br>o "I agree with you 100%, the Census Bureau shouldn't be asking those types of questions."<br>o "My opinion is that the Census Bureau is a joke."<br>o "Immigrants shouldn't be here." |

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| | | | ● CSR should never resort to using profanity/vulgarity under any circumstances |
| **8** | 8.3 | Call Avoidance - stopped responding during call | ● Stayed engaged throughout the call to ensure the respondent did not think the call had ended |
| **8** | 8.4 | Call Avoidance - disconnected call before interaction was completed | ● Ensured the call was disconnected only after it was completed and the respondent was engaged in ending the conversation<br>● Used the closing statement when call was completed to ensure the call was not prematurely disconnected<br>*Note:* Observance of inappropriate disconnect must be observed or validated. Example: Screen capture review, system/report indicators. Audio of dead air does not confirm CSR has disconnected the call |
| **8** | 8.5 | Call Avoidance - delay in script opening | ● Provided opening immediately when call was received<br>=> Scoring Direction: CSR must acknowledge receipt of call by providing the Greeting script in English immediately upon receipt of call (not applicable to single skilled NENS only CSRs)<br><br>=> Scoring Direction: CSR must acknowledge receipt of call by providing the applicable language Greeting script immediately upon receipt of call (applicable for single skilled NENS only CSRs)<br><br>*Note*: Avoid CSR caused delays in acknowledging respondent when call is received<br>Example:<br>o CSR is engaging in side talk with other CSRs<br>o CSR is clearly not prepared when call is received<br>o CSR not paying attention when call comes in |
| **8** | 8.6 | Falsified data | ● Entered data accurately to ensure no falsified or misrepresented information was entered |
| **8** | 8.7 | Failed to demonstrate self-control and patience | ● Demonstrated self-control based on respondent's actions:<br>For example:<br>o Remained composed and controlled emotions when respondent became upset<br>o Used excellent customer service skills to deescalate an upset caller<br>o Avoided addressing the respondent in a manner that would agitate an escalated situation<br>o Did not match the respondent's emotion in an escalated situation |
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# Appendix H: Outbound Dispositions and Case Status Definitions

| CSR Disposition | Definition | Case Status |
|---|---|---|
| Answering Machine – Left Message | The call is connected to the respondent's voice messaging system. The CSR is able to leave a voicemail. | Active; After 5 instances, Closed Max Answering Machines. |
| Answering Machine – No Message Left | The call is connected to the respondent's voice messaging system. The CSR is unable to leave a voicemail (i.e., the voicemail box is full.) | Active |
| Call Disconnected | CSR determines the call has ended abruptly, likely because of poor connection (i.e., the respondent is in midsentence when the call drops.) | Active |
| Case Already Closed | The CSR receives a call with a case that has already been closed by the Agent Desktop. | N/A - Remained Closed |
| Case Already in Use | The CSR receives a respondent callback where the case is currently being used by another CSR. | Active |
| Case Already in Use per DCT | The agent receives a call and when they reach the DCT, the case is already being used by another agent on a separate transaction. | Active |
| Case Not Found | The CSR is not able to find a valid case for the respondent during a respondent callback. | Active |
| Case Not Found per DCT | The CSR receives a call and when they reach the DCT, the tool cannot find the case. | Active |
| Congressional DNC | The respondent indicates they are on the Congressional Do Not Call list. This disposition was manually removed during operations and the CSR was instructed to use the Refusal Aggressive. | Closed - Congressional Do Not Call |
| Fax/TDD or TTY | The CSR recognizes a Fax/TTY tone that is not connected to a respondent. | Active |
| Interview Completed | The CSR is able to conduct the entire interview. | Closed - Completed |
| Interview Partial | The CSR is able to conduct part of the interview, but does not reach the end. | Closed - Partial |

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| Language Barrier – Transfer to English | The CSR receives a Spanish call where the respondent speaks English. | Active |
| Language Barrier – Transfer to Spanish | The CSR receives an English call where the respondent speaks Spanish. | Active |
| Language Barrier Other than English or Spanish | The CSR is unable to speak with anyone on the roster who speaks English or Spanish | Active; After 2 Instances: Closed - Max Language Barriers |
| None Selected (hidden value) | Hidden value that is system selected at the end of ACW if no disposition has been selected | Active |
| Qualified Respondent Never Available | The CSR is not able to complete the prequalification screen and the respondent indicates the person we are trying to reach will never be available (i.e., they have passed away.) | Closed - Qualified Respondent Never Available |
| Qualified Respondent Temp Not Available | The CSR is not able to complete the prequalification screen, but respondent indicates they will be available at some point in time. | Active |
| Refusal – Nonaggressive | The CSR is able to explicitly determine that the respondent did not want to continue with the call but the respondent is not aggressive (i.e., clear hang-up, security concerns, scam concerns, etc.) | Active; After 3 Instances: Closed - Max Refusals |
| Refusal Aggressive | The call is ended because the respondent is disrespectful, uses foul language, and yelling. | Closed - Aggressive Refusal |
| Respondent Will Call Back | The respondent indicates they will give a call back at a later time | Active |
| Scheduled Callback | The CSR is able to complete a valid scheduled callback before the call is over. | Active |
| Technical Error | The CSR is prevented from preforming their duties because of a technical error. | Active |
| Threat | The respondent has given a threat, that encompasses self, others, property, etc. | Closed – Threat |

Source: Maximus, 2020 Census, Agent Desktop Functional Design Specification.

# Appendix I: Outbound Flow